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CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

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200,000 Farmers are Using this Engine

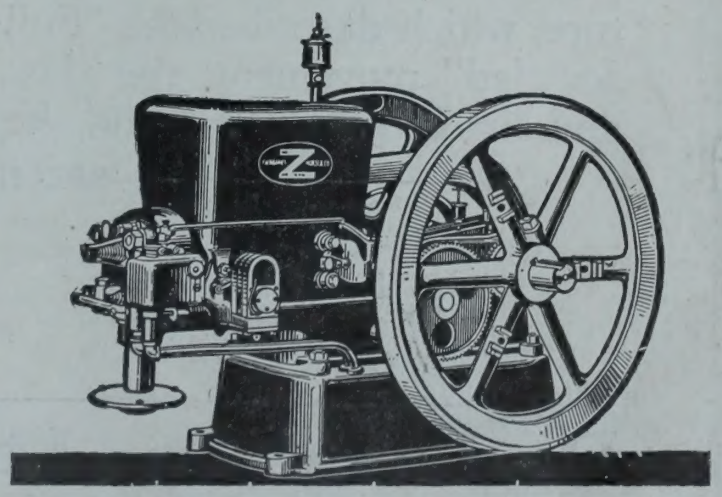
—and every one of them has demonstrated to his own satisfaction that it gives more than rated powerand does its work better and more economically than any other farm power unit. These

Fairbanks-Morse "Z" Engines 1½, 3 and 6 H.P.

that are in use are the best advertisements that you as a dealer in gasoline engines can have, for each one represents a satisfied customer who passes the word along to his neighbors.

Make the most of this advertising. These neighbors are prospective engine purchasers.

Our nearest office can tell you about the "Z" Engine proposition. Write to-day.



The Canadian Fairbanks-Morse Co.
Limited

St. John, Quebec, Montreal,
Ottawa, Toronto, Hamilton,
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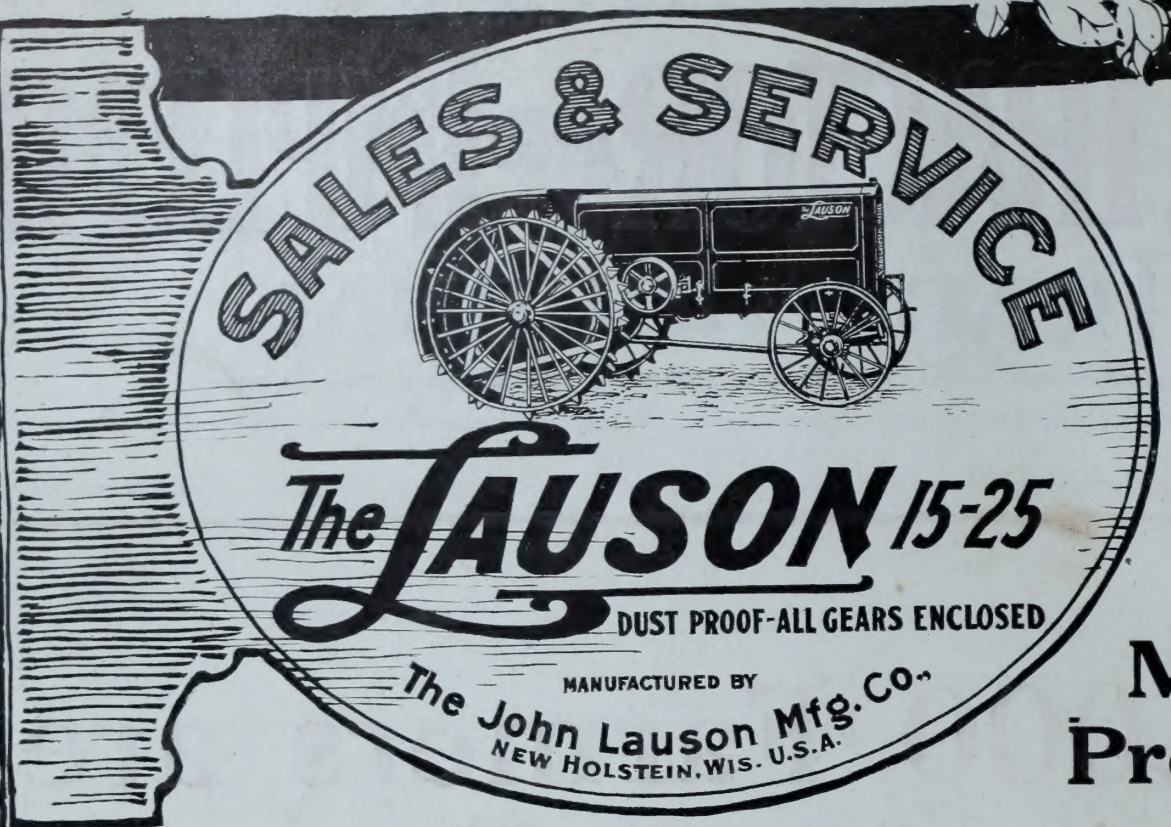


This Sign Means Prestige

THE LAUSON SALES AND SERVICE SIGN on the store of a dealer lends prestige to his business. The Lauson Full Jeweled Tractor has made and is making such a wonderful impression all over the country at demonstrations and in actual service that farmers realize it is the highest development of tractor construction.

In addition, the Tractor has back of it the Lauson twenty-three years' reputation as builders of reliable farm engines. This reputation is so high as to have become almost a by-word.

Write for the Lauson literature, which describes the "Full Jeweled" movement, the dust and dirt-proof construction, the Lauson fool-proof transmission and the other exclusive Lauson features. We will also tell you about generous profits and ample protection afforded Lauson distributors and dealers.

Some desirable territory is still open — perhaps yours — and it will be to your advantage to write immediately.

SPECIFICATIONS

Rating—Drawbar H.P. 15; Belt H.P. 25.
Engine—4¼-inch bore by 6-inch stroke, valve in head.
Number Cylinders and Cycle—Four.
Normal Speed—R.P.M. 950.
Lubrication System—Splash and force feed.
Ignition—Dixie Magneto.
Carburetor and Fuel System—Kingston Gravity Feed.
Cooling System—Perfex radiator.
Belt Pulley—18-inch by 8-inch; 475 R.P.M.
Number Speeds Forward—Two.
Transmission—Lauson Selective Type, sliding gear; oil tempered gears.
Speed, M.P.H.—Low, 1¾; plowing, 2¼; high, 2½.
Number of Wheels—Four.
Drive Wheels—54-inch diameter; 12-inch face.
Guide Wheels—32-inch diameter; 6-inch face.
Wheelbase—86-inch. Tread—52-inch.
Starter—Christensen Compressed Air.
Total weight, less fuel, water, oil and lugs, 6,000 lbs.
Shipping weight, with standard equipment, 6,500 lbs.

De Laval Co., Ltd. Peterboro, Ont.

Distributors for Eastern Canada for
THE JOHN LAUSON MFG. CO., NEW HOLSTEIN, WIS.

Lister
POWER ON THE FARM

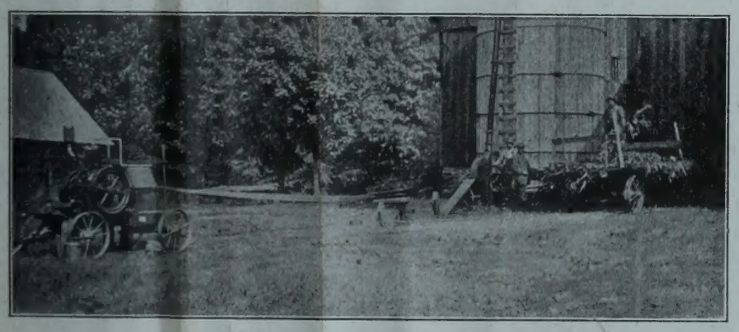
A Popular Line of Farm Power Machinery

FORMS THE BASIS OF

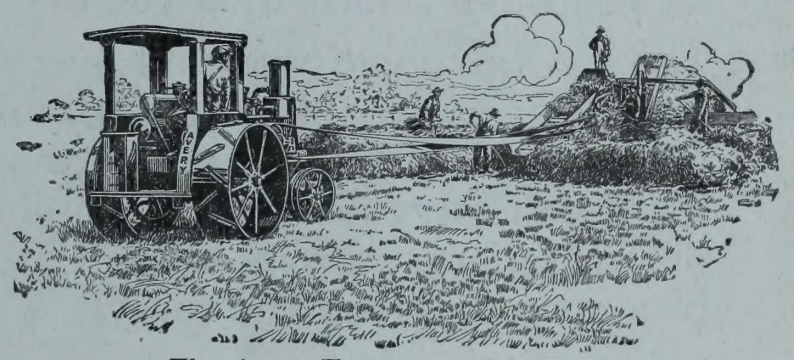
A Successful Agency

The Lister Line offers good, clean-cut commissions, old-established and well-advertised goods, expert sales assistance and service.

LISTER ENGINES	MELOTTE SEPARATORS	LISTER MILKERS	LISTER GRINDERS	LISTER SILOS AND FILLERS	AVERY TRACTORS
Built in England and sold all over the World.	Over 50,000 in use in Canada.	Milk in the natural way—thus safest for cows.	Guaranteed greater capacity for size than any others.	A good silo well filled—can be operated by as low as 5 horse-power.	Built in five sizes. A size for every size Farm.



The Lister Silo-filling Outfit



The Avery Tractor on Belt Work

To Lister Agents—If you are not selling our full line, write now for prices and terms for 1919. All our goods are "best sellers."

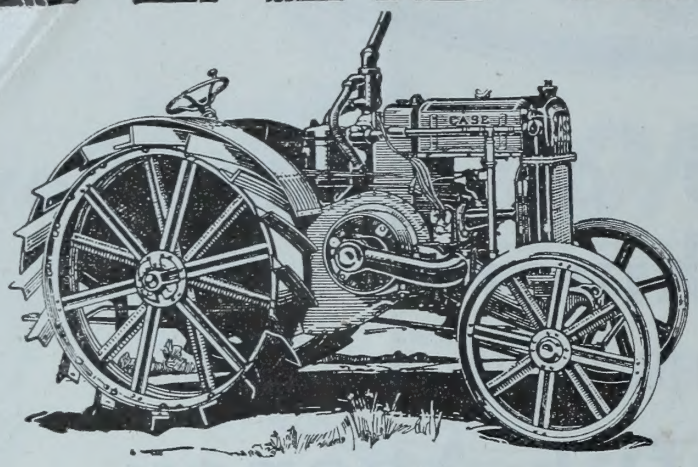
To Dealers Generally—If we are not represented in your territory, write for agency terms and we will have a representative call upon you.

R. A. LISTER & CO. (CANADA) LIMITED

58-60 Stewart Street - TORONTO

Also at Wall Street, WINNIPEG

CASE 10-20 15-27 KEROSENE TRACTORS



Seventy-seven years of experience have produced this tractor—seventy-seven years spent in the development of power-farming machinery.

As a result you have, in a year when tractors are in demand, a type that is the most saleable of any that a dealer ever put before his customers.

There will be a demand for tractors in your town this year and a greater demand in the years to come. Look over the Case points of superiority—all 10 of them—and then ask us for further information you may desire.

The Case is doing work all over Canada, and its users are fully satisfied, no matter what type they are using. Ask them about it. If you carry power farm equipment or deal with farm customers, the Case should be among the stock you carry.

Write to-day.

Case Superiorities

1 Weighs about 5,600 pounds. Low and compact with short wheelbase. Turning radius 13¾ ft. Stays on all fours.

2 Rated 15 horsepower on the drawbar and 27 horsepower on the belt, which is only 80 per cent. of its actual capacity.

3 Four-cylinder Case valve-in-head motor. Removable head. Motor is set crosswise on frame, affording use of all spur gears. This conserves power.

4 One-piece cast main frame, forming dustproof housing for rear axle, bull pinion shaft, transmission and the bearings for these parts. Also a base for motor. This construction brings rigidity and prevents dis-alignment.

5 Belt pulley mounted on the engine crank shaft. No gears used to drive it. Pulley is part of the tractor, not an extra-cost accessory.

6 All traction gears are cut steel, enclosed and running in oil. No bevel gears, chain, worm or friction drive parts.

7 Case Sylphon Thermostat controls cooling system and insures complete combustion of kerosene in the motor. Prevents raw fuel from passing by pistons and diluting oil in the crank case.

8 Case air washer delivers clean air to carburetor. No grit nor dust gets into cylinders to minimize their efficiency and shorten their life.

9 All interior motor parts lubricated by a combination pump and splash system. Speed governor, fan drive and magneto are dustproof and well oiled.

10 Hyatt Roller Bearings throughout High tension ignition. Kingston carburetor. Radiator with a cast frame. Core, copper fin and tube; non-clogging type.

The Canadian Fairbanks-Morse Company, Limited

St. John Quebec Montreal Ottawa Toronto Hamilton Windsor

CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

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Tractor Exhibition Shows Improvements

The Big Show at Kansas City, February 24 to March 1, as Seen by Our Special Representative

J. FULLER BUELL

THE Fourth Annual Tractor Show held in Kansas City the week of February 24 to March 1 held much of vital concern to Canadian dealers and buyers of tractors and power farming equipment, representing, as it did, the bringing together on a gigantic scale men from Canada, the United States, Australia and Europe in whose hands rests the future development of this industry. Dealers from Canadian points as far distant as Calgary were present.

The millions of dollars expended on this gathering were largely for the purpose of acquainting the agricultural world with every element of development along the lines covered, and a simple narration of my six days of constant contact with this exposition must hold much of interest to every reader of CANADIAN MOTOR, TRACTOR & IMPLEMENT TRADE JOURNAL if this prime objective of the Show is to be attained.

In it were housed some hundred and fifty different models of tractors, embracing everything from little garden machines to giants suited to enormous western tracts. There were two-wheeled machines, three-wheeled, four-wheeled; and a variety of crawler types that made the visitor dizzy when he attempted to draw comparisons. The building, erected solely to house this Show, cost $45,000.

The hundred and fifty different types of tractors, spoken of a moment ago, did not make up the whole show by a long shot. Over two hundred makers of tractor parts, materials and equipment were there and each vied with his neighbors to make the exhibit interestingly instructive to every type of visitor.

This is my fourth year at the Show. In that time I have witnessed the demands of farmers and dealers for better machines than the first types, that were but modifications for the most part of the old steam roller or threshing machine. The war has done much to bring the farm tractor of to-day to a point of perfection where it puts the machine of four years ago to shame.

Engineering skill has been bent on developing tractors that will outwork, outlast and outserve every other piece of farm machinery and completely revolutionize the modern farm and the bank balance of the farmer.

It would be unfair to say that the tractors displayed at the Fourth National Tractor Show indicated the same attention to details and refinement possessed by the offerings at the recent automobile show. I say it would be unfair, because even the most casual visitor to the Tractor Show this year is impressed with the very evident fact that tractor perfection has been carried farther than engineers have ever bothered to go with automobiles.

Tractic Troubles Overcome.

IN the old days the tractor was not taken seriously as an economical necessity for the progressive farmer and was largely produced to meet a certain established demand for a limited number who had investigated its use and learned through actual experience that they could not well dispense with this means for developing greater acreage and plowing better, deeper and so very much quicker. The manufacturer, too, was handicapped with long credits that retarded his progress.

Students of this great national development have compiled statistics that show the elements that cause trouble and loss of time for the farmer. Persistently and skillfully the manufacturers have taken these pointers to heart and eradicated the trouble-developing features from their machines. All this means that

A typical corner, showing how the booths were decorated and displayed, at the Kansas City Tractor Show, Feb. 24th to March 1st.

Experience in actual service has taught us all that the reliable tractor need not necessarily be built along the lines of its predecessor, the steam thresher. We have come to value the good points of a wide range of design which incorporates the two and three wheel machines and the track-laying (tank-type) tractor.

A monster building of 110,000 square feet floor space had been erected directly opposite the Union Station in Kansas City, especially to house this Fourth National Tractor Show.

every exhibitor had much to tell the interested visitor. It is not merely a matter of a good, clean-cut practical machine that he wants to talk to you about, but he will show you how, during the past year, trouble breeding points have been weeded out and vast improvements worked in their place.

This same thing applies with two hundred separate exhibits of parts and accessories. Ignition manufacturers show how they have surmounted past failures to perform under the most severe usage; carburetor-makers have designed and redesigned every

feature of their devices to provide as nearly care-free service as humanly possible; special steels have been compounded for use in certain vital parts of the modern tractor; bearings have been developed along hithertofore unexplored lines to overcome certain friction weaknesses. Millions of dollars have been expended during the past year to bring the tractor exhibited at this Fourth National Show up to the point where it is capable of giving the sort of service demanded by the most exacting buyer.

Fuel is a much discussed question that plays a very big part in this show. On the one hand there are the tractors designed to successfully operate on kerosene and on the other side the ones for which gasoline is the only fuel recommended. There is, of course, no question but that kerosene, or coal oil, is much more economical to buy, and many makers of tractors designed to operate on this fuel show positive statistics that prove greater efficiency in consumption per acre over gasoline.

Counteracting this is the experience of many that this fuel is less responsive and in many cases is known to require greater attention as to adjustment of carburetor, closer watching of the oil in engine base and more frequent cleaning of carbon accumulations. The gasoline-burning machines are less handicapped with the variation in fuel price now that a considerable drop in the price of gasoline is known to be imminent.

It has become common, accepted practice to indicate the horsepower and capacity of tractors by the use of two numerals, the first indicating the drawbar horse-power and the second the belt or brake horse-power. For instance, we will refer to a tractor as being a 7-14. It is at once clear that the machine delivers seven horse-power for plowing, discing, harrowing and other hauling needs, while it has a power capacity sufficient to operate saws, silo fillers and other belt-driven machinery requiring not more than fourteen horsepower.

In a general way we can sum up the varying horse-powers suited to farms of given sizes by assuming that a 5-10 machine would be suited to small hilly farms where no heavy belt-operated equipment is involved; an 8-16 would be suited to farms varying from 90 o 150 acres; a 10-20 would be suited to from 150 to 180 acres and provide ample power for the average fairly heavy belt work; a 15-30 for larger farms, and so on in like ratio.

It took all six days to make the complete rounds of the Show, stopping long enough at each booth to drink in all that was shown, going in most cases down to the smallest details of construction. It would be impossible to take the space required to detail all this, so I will sketch out the outstanding points in which I feel that you will be most directly interested.

Big and Little Machines

AS we progressed up the first aisle, a very serviceable appearing machine met our eye—a National Tractor, made in Cedar Rapids, Iowa, and Derby, Connecticut. A successful adaptation of friction transmission has always been a marked feature of the National Tractor as a 12-22, 3-plow, 4-wheel machine, and in the model exhibited showed a number of refinements, intended to safeguard the owner from trouble, and at the same time incorporate a vastly increased degree of service.

In contrast to this was a display of Waterloo Boy Tractors, which are powered with a 2-cylinder, horizontal motor, with valves in the head. An electric motor operated one of the machines and showed the working details.

From here was a sharp step-down in size to a little Beeman Garden Tractor—a self-contained power unit, that provides power for light discing, harrowing, plowing and the many other uses of a small walking tractor suited for farms of small acreage.

This machine is entirely controlled by two hand levers extending back to the rear of the machine. The operator, walking behind and holding these handles, steers and controls the engine speed.

The Advance-Rumely line of Oil Pull Tractors, starting with a 12-20, up through 16-30, 20-40 to the 30-60 was shown in an imposing display, while an electrically operated thresher, with cut away sections, was a source of attraction.

From the smallest type of tractor to a machine that is a giant in proportions and performance, the line of Avery Tractors, dressed in white, with gold leaf striping, carried well the appreciation for this line of machines. The display included power cultivators, the Baby Avery 5-10, straight up through to the huge eldest member of the family, which it seemed must be altogether too large to be brought into even a show building especially erected to house large tractors.

Polished brass and nickel in profusion next attracted the eye and centered the attention on the 9-18 Case machine exhibited by the J. I. Case Threshing Machine Company. This central point of the imposing Case exhibit was on a raised frame and driven continuously by an electric motor, cylinders were cut away, air cleaners stripped open, the oiling system shown in operation and the syphon thermostat, by which the temperature of the circulating water was governed, was clearly understandable to all. The complete line of Case tractors included six splendid machines of varying types and sizes, while component parts were displayed on well-arranged stands. A Case thresher, electrically operated for the benefit of the show visitors, was an interesting, moving background display.

Hession's New "Wheat"

STACKS of wheat piled around the next exhibit heralded the "Wheat" Tractor, formerly known as the Hession, and manufactured by the Hession Tiller & Tractor Corporation. The attractive name of "Wheat" is a suitable introduction to a machine that along the most practical lines in the world shows remarkable added serviceability. On one side of the exhibit we found a splendid, sturdy, 3-plow farm tractor, while on the opposite side was the same machine mounted on artillery wood wheels, equipped with solid rubber tires. This is one explanation for the vast crowd that invaded the Wheat booth. An ingenious feature is that the gear that furnishes final drive to the rear wheels when equipped for agricultural work slips off a splined shaft and is instantly replaced with a chain sprocket when the road wheels are to be applied. The design of the rear wheel mounting is such that the land wheels are very readily removed and the road wheels are easily slipped on the shaft in their place. These road wheels are provided with chain sprockets, so that the final work of changing over from the agricultural to the road machine is accomplished by slipping two short chains over the sprockets, one on a side, and slipping the master links into place.

Shown in the act of turning a harrow, the Indiana Tractor, made by the Indiana Silo Company, was found to possess many attractive points, coupled with most substantial construction. This 2-wheeled machine, with extremely high clearance, powered with a sweet-running, 4-cylinder motor, is capable of performing a very wide range of usefulness from plowing to cultivating, and on through practically all the stationary power needs of the average farm. This, primarily a small farm tractor, pulls a 14-inch plow and provides perfect one-man control, by carrying the steering and control members out of the rear, where the operator may either ride the implement or utilize a seat mounted on a caster wheel, when the non-riding type of implement is employed. The machine on exhibition was shown standing with one wheel at an elevation some eight inches higher than the wheel in the imaginary furrow, and yet the body of the tractor was perfectly level.

Next we came upon a heavy-duty, four-wheel tractor, the Liberty, made by the Liberty Tractor Company—a machine possessing a most thoroughly practical design worked out so that even the most minor details represent careful watchfulness to provide an extreme factor of safety for all possible conditions.

Mogul, International and Titan Tractors, giving a range in power from 10-20 to 15-30, made up the exhibit of the International Harvester line—machines known throughout the world for their unfaltering service.

These tractors, with their enviable reputation, their husky construction and their host of friends, seemed to receive the most serious, painstaking attention, with none of the curiosity that had marked the preceding exhibits.

A Walking Tractor

A SECOND and still different type of small walking tractor was shown in the Auto-tiller exhibited by Hall-Barker, Totamy, Penn. This machine, powered with a large, heavy-duty, single cylinder, 4-cycle motor, develops 11 H.P. and readily handles a 14-inch plow. Plowing, however, is but one of many uses to which this tractor is suited. As an addition to providing traction means for all the work required for a small farm, the machine has a well-designed power take-off that operates farm machinery within the power range of its engine.

Sturdiness of design and construction that was readily recognized distinguished the Hart-Parr Twin Cylinder, 4-wheel tractor—a 3-plow machine that delivers 50 brake horsepower on the belt.

A moving display operated by electric motor showed the ready accessibility to every part of the Huber Light Four, 12-25, 4-wheel, 4-cylinder tractor; Huber frame construction permits of exceedingly square turning, and in a comparatively small machine great power is provided with simplicity.

An interesting study in horizontal 4-cylinder motors was furnished in the 22-45 and 30-60 Aultman & Taylor Tractors, while a third model—a 15-30, was provided with a vertical, 4-cylinder motor, while the well-known Aultman Taylor transmission principles were followed out in all three machines.

A cut-away model, showing working details of a sturdy power plant and transmission, was a central feature of the exhibit of the Russell Co. The machines on exhibition included a 15-50, 4-wheel, 4-cylinder machine, to a 20-40, up to the giant 40-80.

Powered with a 16-valve motor, with the valves in the head, the new Twin City 12-20 Tractor was chock full of advanced engineering principles. Here was blended up-to-the-minute design with all the old-time principles of sturdiness of which Twin City Tractors are known throughout the country.

Complete inclosure of all working parts was carried through to the final drive by means of the live rear axle, while a well-received detail was the provision of removable cylinder wheels, so that should a cylinder become scored, a new sleeve is easily substituted.

With nothing sensational to its design, but showing thorough practicability and fitness for heavy duty, the "All Work" 14-28, kerosene-burning tractor showed its exceedingly accessible design by the way in which all the details were readily observed, without the necessity for in any way stripping the chassis.

With one front wheel elevated to a height some two feet from the ground, the Parrett 12-25, 4-cylinder, 4-wheel tractor graphically illustrated its three-point flexibility from afar.

A complete cut-away working model of the Parrett transmission was displayed in the foreground, operated by a small electric motor.

New Starting Devices

THE first worm drive machine that we had come across up to this point was the Coleman—a well laid out, 4-cylinder, 4-wheel machine, with an all-enclosed transmission.

While proportioned and obviously designed for combining economical manufacture with heavy duty service, a 6-12 Allis-Chalmers, two-wheel tractor of the one-plow type was the centre of much interest. The operator is carried on a rear member extended back beyond the implement and carried on a single idler wheel in cases where non-riding implements are used. In the instance of a riding implement, however, the operation is in full control of the steering and speed variation of the tractor by means of the long rear column. In contrast with this machine was a

Continued on page 20.

$45,000 was spent on the building that housed the Fourth Annual Tractor Show at Kansas City. February 24th to March 1st. This was the building—above—it's torn down now, as it was for the show week only

"UPLIFTING" THE AGENT

By W. J. Allin
Implement and Tractor Agent, Chatham, Ontario.

THERE is plenty of scope for "uplifting" the farm implement and agricultural machinery business in Canada. I am writing, of course, from the viewpoint of the agent, and I believe every live man selling implements, machinery, or accessories of any description, to the farmer will welcome with open arms the publication of a monthly conducted along the lines of the *Canadian Motor, Tractor, and Implement Trade Journal.*

The implement agent should be, in fact, to meet with the success his efforts merit, must be—a business man. This business is one which calls for the best of business common sense and good judgment. Years of thorough study of the field can usefully be devoted to its mastery. The day of haphazard warehousing, both of machinery and spare parts, is vanishing. There are implement agents in Ontario—too many, I am sorry to say, who have a cluttered-up, grimy, cobwebby warehouse, with machinery which is rusted or out of date occupying what should be valuable floor-space, and spares piled, higgledy-piggledy, in some dark corner, or merely lumped together without much attempt at systematic classification in half a dozen wooden boxes.

The problem of warehousing is of prime importance. Get all the space you can—and then you'll likely find you could utilize more. Get seasonable goods up to the front, in a good light. If it's the "slow" season for the ordinary farm implements, place electric or other washers, cream separators, or a phonograph in the window.

Don't get your stock too large, especially when in most parts of this province a 'phone call or wire will bring you any desired article direct from the manufacturer. in short order.

One day last fall a dealer out in B———, a few miles from here, asked me to rush him two implements, and to oblige him I sent them. He got more than he could sell, and now these same two are rusting outside his store. Estimate carefully probable demands and buy accordingly.

Don't keep many tractor or other power machinery parts in your warehouse when you are in close touch with the concern which can furnish them to you. For example, I handle the Avery tractors, but I don't bother about the question of parts, because in less than twenty-four hours I can get them shipped in to me, on a "rush" order.

But, keep as large a stock of judiciously selected implement parts as experience tells you will come in useful. Keep your stock up-to-date, and well classified, so that you could lay your hands in the dark on any sized pinion, casting, knife for an ensilage cutter, straight or revolving coulter, knotter for a binder, etc.

Study the requirements of the section you are serving, as to soil, size of farms, class of produce, average wealth of your community, etc. For example, in dealing with farmers owning a heavy clay soil, such as many parts of Kent and Essex Counties possess, no dealer should claim that a certain tractor will pull a four-bottom plow—which it could do easily in a lighter soil, but he should be candid, and state that a three-bottom plow is the limit under local conditions. Find out what your tractors can do—and don't enlarge upon this to possible buyers.

Again, if the majority of farms are small, or cut up into small fields, don't try to make out to a farmer that he must get a tractor. If he uses four horses and employs one man, even if he got a tractor he could dispense with only two men. On the other hand, if he has eight horses working, and two farm hands, point out to him that he could get along, if he had a tractor, with one less laborer and six fewer horses. Study each potential customer's needs as carefully as if the problem were your own—as it is, indeed, in a sense—and then sell him what he *ought* to have. If he should have a tractor, get after him and sell him one.

The implement agent usually pays *too much* attention to selling, and *too little* attention to service. This is not sound business, and one reason why I believe this state of affairs prevails is that perhaps nine-tenths of the agents don't know enough to give service! This may seem like an astonishing statement to make, but I am prepared to back it up, from years of experience on the road, and after getting acquainted with hundreds of agents.

An agent should qualify himself to give an efficient service on repairs, and be able to mend an implement, or start up and run a balky tractor—in fact, show the farmer how to best use what he sells him. By studying his lines, and perhaps keeping abreast with technical or trade publications, he can do this. He will find that the companies for which he holds agencies will be

W. J. Allin, implement and tractor agent, Chatham. He served his apprenticeship on the road

only too willing to co-operate in this. Farmers appreciate good service every time.

Farmers lay too much stress on time payments. They are loath to pay cash, even when they have the money in the bank. That's the agent's fault! He has permitted, nay, encouraged, the farmer to pay on the time system. A false basis for business, and a difficult feature of the business to eradicate.

I may mention one way I am trying to overcome this in my district. When I am discussing a sale with a prospect I first mention the price for cash-on-the-nail. Afterwards, when this has had a chance to soak in, he likely asks the time price—and inevitably contrasts them.

I have had some interesting experiences in collecting instalments on notes in Kent County, as well as Essex, and one recent one is quite worth relating. It redounds to the credit of the farmers in this section, and carries its own moral.

One day a few weeks ago I took a look over some notes that were due, and then took a look at the roads—an awful state they were in just then, despite the open winter we had. So I decided to let the Government try its hand at collecting the cash for me. Accordingly, I made out a list of 24 men whose notes were due, wrote them to this effect, and enclosed a stamped, addressed envelope for the return of the money to me

What was the result? In a surprisingly short space of time—in several cases by return mail— I received cheques or cash, and 23 of the 24 came through without appreciable delay! I tell you, that's *some* record, and one which this community has a right to be proud of. And that's typical of notes which have fallen due since; 95 per cent. answer quickly by sending the money. I could mention communities where the percentages would be reversed, and 95 per cent. *would not* answer satisfactorily.

In that case where 23 answered, the one man who didn't was a French-Canadian who couldn't write English; he was located in a distant part of the county; and was just recovering from a severe attack of flue!

So, maybe he had an excuse.

Here are a few useful tips for the mechanical aid and comforts of the automobile owner and dealer:

If the bow ends on an automobile top are fastened together with a wired cable on one side this will enable one man, unaided, to raise the top on the largest of automobiles.

* * *

To make the grease-cup on the rear axle of a Ford easier of access, some man with an inventive mind has placed it at the end of a two-inch pipe.

* * *

A new kind of spark plug has a little priming cup attached which materially aids prompt ignition.

An exceptionally neat-looking front is shown by Mr. Allin—Gramophones and cream separators were shown in this window during February. A cutter held a prominent place until the middle of February, when Mr. Allin took it out on account of the snow-less winter.

What Ontario Government is Doing

By W. H. DAY, B.A.

Formerly Professor at Ontario Agricultural College

Two tractors in operation at recent farm power course, given at Guelph, Ontario.

THE Department of Agriculture of the Province of Ontario has been carrying on quite an extensive farm power programme during the past winter, in order that knowledge of the operation of farm tractors might be as widely diffused as possible, more especially among those who sell them as well as among those who operate them.

The farm power programme of the Department this winter has been an outgrowth of the one held a year ago, and of two conducted in local centres through the provinces, namely Ayr and Preston, last spring just as the snow was going off. These were three-day courses, so called, but in reality the work was taken up in three afternoons, the forenoons being devoted in part to practical study of engines.

In November the Department of Agriculture began a series of two-day courses all over the province, arranging about one course in each of the older counties of Ontario. Two instructors were sent out together, one on the electrical end and one on the engine end of the work, and there were two groups of instructors, so that two courses would be going on at a time, and each group would conduct two courses a week, namely Monday afternoon, Monday evening, Tuesday afternoon, and another course Thursday afternoon, Thursday evening and Friday afternoon—the one forenoon during the courses being devoted to practical study of engines.

At these two-day courses lectures were given on general principles, battery and magneto ignition, carburetion, study of cross sections of engines, care, operation, and engine troubles, etc. Special demonstration material, such as a small sectionalized engine, carburetors, magnetos, and other equipment were used to make the course as technical as possible in the allotted time.

The first of the three longer courses was that which was given in Chatham, from January 6 to 10. At this course there were about half a dozen tractors presented but very little practical work was done, though these tractors were demonstrated in the intervals after the lectures. The attendance at the lectures at Chatham was between seventy-five and one hundred.

The second course was given at Guelph, from January 28 to February 7, and there was an average attendance of two hundred and twenty. Thirteen tractors were exhibited here, including the Gilson, Beaver, Waterloo Boy, All Work, Cleveland, Titan, Case, Heider, Happy Farmer, Avery, Emmerson Brantingham, Moline Universal, and Massey-Harris.

In this in course we had thirteen practical exercises, as follows:

Removing and replacing piston and rings; adjusting bearings; timing magneto and camshaft and timing valves; adjusting tappets; cutting gaskets; valve grinding; babbitting, scraping and fitting bearings; carburetor assembly; magnetos; battery ignition, jump spark ignition; make and break; test break horse power, two engines; A.C. and D.C. generators and motors; measuring voltage and current; study of gasoline; electric plants and hydro apparatus; rope and cable splicing; soldering.

THE class was divided into twenty-six groups and the exercises and tractors were rotated around the groups so that when the course ended every man had had an hour and a half on each practical exercise and the same on each tractor. When a group would go to a tractor a demonstrator of that machine would spend the first half of the period in showing the principles and fine points in connection with the machine, and during the last half of the period each man in the group was given an opportunity of handling the tractor for a few minutes.

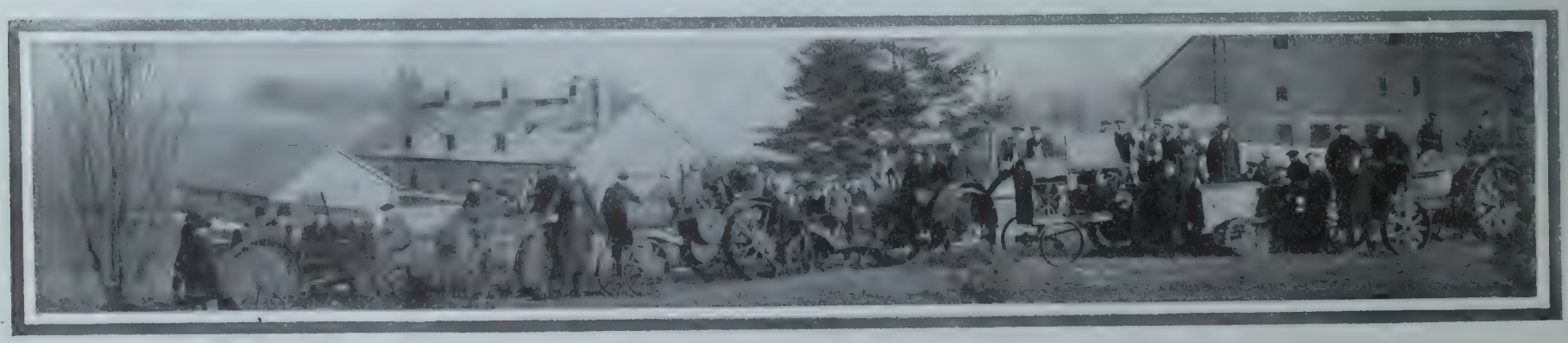
The third large course was held at Kemptville School of Agriculture during the last two weeks of February. It was under the direction of W. J. Bell, Principal of the school, and was almost identical with the course held at Guelph. Nine tractors were entered for the course at Kemptville, and, consequently, there were nine practical exercises. A number of the lectures at this course were given by other speakers than those who handled the course at Guelph.

All the lectures on electricity were illustrated by experiment. Lectures given included the following topics: Electricity, by W. H. Day, Professor of Physics, O.A.C.; General Principles of the Gasoline Engine, by L. G. Heimpel, Demonstrator of Physics, O.A.C.; The Influence of the War on Power Farming, by G. C. Creelman, B.S.A., LL.D., Commissioner of Agriculture and President of O.A.C.; Motion Pictures of Gasoline Engine, showing Principles and Uses, by the Motion Picture Bureau, Ontario Department of Agriculture; Carburetion, by A. C. Campbell of the Sawyer-Massey Company; Power, by W. H. Day; Systems of Ignition, by M. E. Toepel of the Splitdorf Electrical Company; Details of Gasoline Engines, by A. C. Campbell; Tractor Motors, by A. C. Campbell; The Oil Industry, by W. A. P. Shorman of the British American Oil Company; Hitches for Different Machines, by A. C. Campbell; Spark Plugs, by M. E. Toepel; Transmissions, by L. G. Heimpel; Lubrication, by a representative of the Imperial Oil Company; Operation and Care of Engines and Tractors, by L. G. Heimpel; Engine Troubles and How to Locate and Remedy Them, by L. G. Heimpel; Water Power on the Farm and How to Take Advantage of It, by R. R. Graham, Lecturer on Physics, O.A.C.; Gasoline and Kerosene Electric Plants, by A. H. Petal of the Delco Light Products Co.; Types of Motor and Tractor Design and Construction, by M. K. Douglas of the Massey-Harris Co.; Hydro Installations, by J. W. Purcell of the Hydro-Electric Power Commission; Hydro-Electric Power on the Farm (illustrated), by J. W. Purcell; Windmills, by R. R. Graham; and Fuel Economy, including the uses of Kerosene and Hit-and-Miss Engines, by W. H. Day.

The Department of Agriculture of Ontario some time ago adopted the policy of renting tractors to farmers in various parts of the province, in order to better demonstrate the use and usefulness of the farm tractor. Applications for these tractors were so numerous that, ultimately, the province had purchased an aggregate of one hundred and twenty-seven. All were equipped with three-furrow plows and 50 per cent. have double disc harrows. Two, three, and four wheel types, and one, two and four cylinder designs were purchased and distributed, so that similar machines might not be working in the same neighborhood. The Agricultural Representatives of the province were responsible for the routing and general superintendence of the machines in their counties. The machines were arranged in ten groups, over each of which was an expert mechanic, who gave instructions to new operators, looked after the mechanical repairs, and operated the machines where necessary.

Applicants for the machines were required to make applications to the Provincial Representatives, stating the number of acres they desired to have ploughed or disced. The farmer was required to supply fuel and water at the machine, to board the operator and to pay $2.25 per acre for ploughing and $1.25 for double discing once over. An alternative charge was arranged for of 50c per hour, plus 50c per acre in addition to fuel and board, the charge in no case to exceed $2.50 per acre. The methods were optional. When the machines were not ploughing, they were sometimes rented to the councils for road work, and thus provided an additional source of revenue. Seventy-eight of the tractors have also been engaged in silo-filling. Gradually the difficulties experienced in operating and taking care of the machines are being overcome, and an aggresive campaign conducted broadcast throughout the province. Realizing that the purpose of this service has been accomplished, owing to the conclusion of the war, it has been decided to dispose of the machines to farmers or others who desire to purchase them. Already a number of the tractors have been secured by farmers who learned of their usefulness at the expense of the Government, and are now able to operate them themselves. In a number of cases it is the farmers' sons who have insisted upon the addition of farm power machinery to their equipment.

All these machines were overhauled and put in good working order for private sale or are being disposed of by auction before the next seeding begins.



A group of the enthusiastic dealers, farmers, and farmers' sons who took the Guelph course—it was reported that there were some "farmerettes" at this course, but W. H. Day said he couldn't find them with a telescope.

Tractor Salesmen *must be* Experts

By ARNOLD P. YERKES

Formerly U.S. Government Tractor Expert.

"A LITTLE knowledge is a dangerous thing," is the poet's way of saying that it is risky to be ignorant. The better informed a salesman is regarding a meritorious article, the greater will be his ability to "sell" his customers. It would be asking too much to expect a salesman who handles a large line of goods to be an expert on every article, but, in the case of the larger items such as the tractor, there is little doubt but that it will be to his advantage to be sufficiently well informed to qualify as a tractor expert.

In order to influence a customer a salesman must either know more about the article than his customer or at least be able to convince the customer that such is the case. The average man who finds that he is better informed than the salesman on some points about an article is apt to lose respect for the salesman's knowledge in general and cease to be influenced by any statements he may make, feeling that his own superior knowledge enables him to form a more reliable opinion.

It is not an every-day occurrence for the average farmer to spend the amount of money involved in the purchase of a tractor. Before he takes this important step he is naturally desirous of making a very thorough investigation of the various tractors, in order to decide which one will be best suited for his purposes so as to avoid making a mistake. Such being the case, it is obvious that, other things being equal, the salesman who can explain most intelligently the mechanical features of his machine will have the best chance of landing the sale. And in order to talk intelligently concerning the tractor it is necessary to have a real practical working knowledge of the machine and not to depend simply upon being able to quote the catalogs and other literature.

A great many of the tractor men who have attended some of the tractor short courses held by the agricultural colleges or by some of the tractor manufacturers have been greatly impressed by the nature of the questions asked by the farmers attending. A few years ago many of the questions which were asked showed a decided lack of information and general knowledge of tractors on the part of the farmers. This state of affairs has already undergone a decided change and is still changing. The average farmer of to-day who has been capable of earning enough money at farming to permit him to think seriously of purchasing a tractor is usually a pretty keen business man and apt to be quite well informed concerning these machines. At any rate, he will generally possess sufficient knowledge of them so that he can at once detect a lack of it on the part of the salesman, and a great many people upon learning that a salesman who is attempting to sell them an article really knows very little about it but is merely quoting, parrot fashion, the language used in the catalog or other literature and is not capable of answering legitimate questions concerning it, are apt to feel somewhat chagrined, sometimes so much so that they take a strong dislike to the salesman or the article, or both, and refuse to buy.

THE influence on a farmer of such ignorance on the part of a salesman, especially when he is also the dealer from whom the farmer must expect to receive service in case of trouble with the machine, will undoubtedly have great weight in most cases in deciding which machine the farmer will purchase. If he believes that two tractors, handled by two local dealers, possess about equal merit, and becomes convinced that one dealer is thoroughly familiar with his machine, knowing the function of all the parts, etc., while the other is comparatively ignorant, a thinking farmer cannot help but feel that it will be safest for him to buy the outfit offered by the man who is thoroughly acquainted with his goods and who will probably be able to render most satisfactory service in case of need.

The necessity for a salesman possessing all possible information concerning the tractor which he is handling is certainly quite evident. To attempt to detail all the points which should be included in such information would involve writing a thorough treatise on the principles of gas engine operation and a manual on the particular make of machine being handled. The salesman should certainly be fully familiar with the principles of operation of an internal combustion engine. He should know the principles and functions of the ignition, fuel, cooling and lubricating systems. A salesman who is not fully acquainted with the principles of operation of his machine cannot hope to impress a farmer who has attended a few days' short course on tractor operation, because an intelligent man who has attended such a course will have gained a pretty good idea of these principles. The salesman's knowledge of the fundamental principles of gas engine operation should be even more complete and should preferably be obtained through a course of instruction given by a competent instructor supplemented by some practical experience. Where this is impossible, a careful study of a good book on gas engines or a complete home course of some kind should be made.

In addition to this general knowledge of the subject he should be thoroughly familiar with the details of construction of his own machine, down to the last bearing, bolt and rivet. It is not infrequent to hear a tractor salesman asked a question such as "Are the connecting rod bearing caps on your machine held by two or four bolts?" and to hear him reply "I'm not sure," or "I don't know." He *should* know. Such questions concerning details (often very important details) are legitimate and should receive a prompt and correct answer. Not long ago a man asked a salesman whether the crankshaft of the 4-cylinder motor on his machine had two or three bearings, and the salesman didn't know. He knew it was the best machine ever built and could talk for hours as to what it could do and how much better it could do it than his competitors'

ARNOLD P. YERKES

machines (he knew the catalog by heart), but a small matter like the number of crankshaft bearings in the motor meant nothing in his young life. The catalog didn't happen to say anything about them and he didn't know whether there were two or a dozen.

The fullest possible knowledge of his machine should undoubtedly be the first consideration of the tractor salesman, but it is highly desirable that he should also have a sufficient knowledge of farming and farm operations, especially those for which the tractor is used, to enable him to talk intelligently to his prospects on these subjects and be able to offer valuable suggestions concerning possible reorganization of their farming systems to adapt their farms to the use of a tractor, or make them better adapted. In other words, he should strive to know as much as possible concerning his customers' problems, since his ability to help in the solution of these problems will be of material assistance in converting a poor prospect into a very live one.

There are many ways in which such information can be obtained. Much can be gained through reading agricultural papers, and by conversing with individual farmers; the agricultural colleges and extension workers can also help out, but probably the quickest and most satisfactory means of getting acquainted with the farmers' problems is through attendance at farmers' institutes or other similar meetings where such problems are discussed. A salesman who is fully informed as to farming practices in his neighborhood is in much better position to offer sound and convincing sales arguments to his prospects than one who is lacking in this respect. He does not want to use general arguments which do not apply to his local conditions. He should know the best season for plowing in his neighborhood; if this is in hot weather it makes a good point, but there are some sections where the best plowing season isn't in the hottest weather and he should be informed on all such points, so as to be able to offer sound arguments and avoid advancing unsound ones.

A CONSIDERABLE percentage of farm tractors are to-day being used for custom work, and it therefore stands to reason that quite a number of any tractor salesman's customers will either expect to do custom work with their machines or should have it in mind. It is obvious, therefore, that the salesman should be fully acquainted with the possibilities of the tractor for custom work, the possible returns which may be expected from different custom operations, and be prepared to offer valuable advice and suggestions generally concerning the use of a tractor for such work when not required on the home farm. Many farms do not have a sufficient acreage to keep the tractor busy during the entire working season, and in any event a large percentage of farmers can easily find time for doing belt work for neighbors during the winter season. A tractor salesman should fully acquaint himself with all such belt operations which are at all possible in his neighborhood. He should be able to advise the farmer as to the size of the various machines which could be operated with his tractor and what would be a fair day's work output for such machines, the amount of such work which can be done in the neighborhood, etc.

A neighbor's experience usually carries considerable weight with most men, and, wherever possible, facts and figures should be obtained from local men who are using the machine in order that they may be presented to prospects.

AS every salesman knows, one of the most convincing sales arguments is the ability to point to a large number of his machines in successful operation in the neighborhood. Since first-class service is usually a requisite for a completely satisfied customer, the salesman's thorough knowledge of his outfit, in order to furnish satisfactory service and insure a satisfied customer, is of use not only in impressing upon the prospect the advantages of his machine but by insuring successful operation of the machine in actual service. The benefit of such knowledge is therefore cumulative. It helps to make satisfied users out of the first customers, who, in turn, exert a favorable influence on later ones; it may be well likened to a rolling snowball, gathering greater weight with every bit of progress.

"ALL-THE-YEAR-ROUND" VALUE

"Buy a tractor in order to help you with your farm work every month in the year"—that is the slogan adopted by a large manufacturing concern, which has issued a very practical calendar to go with its advice. This calendar reads as follows:

January.—Corn-shelling, feed-grinding, baling, stump-pulling, wood-sawing, hauling, logging and ice-harvesting.

February.—Corn-shelling, baling, feed-grinding, wood-sawing, stalk-breaking and stone crushing.

March.—Plowing, discing, rolling wheat, dragging roads, stump-pulling and dragging corn shocks.

April.—Plowing, discing, seeding, road-building, stump-pulling, manure-spreading.

May.—Plowing, discing, road-dragging, harrowing corn, cultivating corn.

June.—Road-dragging, harvesting, haying, hauling, baling.

July.—Harvesting, threshing, plowing, baling, discing.

August.—Plowing, pulverizing, discing, threshing, baling, corn harvesting.

September.—Seeding, threshing, silo-filling, haying, hauling, harvesting.

October.—Plowing, seeding, baling, clover hauling.

November.—Corn-husking, plowing, clover hulling.

December.—Corn shelling, hauling, feed-grinding, corn-shredding, straw-baling, stump-pulling.

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TRADE JOURNAL

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WHY THIS PAPER HAS BEEN STARTED

THE implement dealer in Canada has seen his field of operations broaden very considerably during the past few years. The sale of tractors has increased so enormously, as a result of the "speeding up" in agriculture to meet war needs, that the tractor has become decidedly one of the most important lines the dealer is handling. This development has, in some respects, made very radical changes in the scope of his business. New problems confront him. More than ever before he needs authoritative information with reference to his business and the lines he is carrying. In other words, he needs a trade paper.

The publishers of the CANADIAN MOTOR, TRACTOR AND IMPLEMENT TRADE JOURNAL have long considered such a paper. As the publishers of *Farmers' Magazine* they have had sufficient contact with the problems of the dealer to realize his needs. This idea grew with the tractor boom; and so, in the belief that it will fill a real want and perform a very active and useful purpose, the MacLean Publishing Company has undertaken the new venture. A thoroughly competent staff has been gathered and the promise is herewith made that the new paper will be the reflex of a sincere and efficient effort to give the dealer the service he requires.

The policy of the CANADIAN MOTOR, TRACTOR AND IMPLEMENT TRADE JOURNAL will be to give the news of the trade and to discuss the problems that confront the dealer. By news is meant everything that is news to the dealer—information about market conditions and prices, news of new equipment, of changes and alterations in standard lines, of broad questions that interest the trade such as tariff, immigration, land settlement, etc. A special feature—in most respects the most important of all—will be articles that tell how progressive dealers are achieving success and that contain practical, business-getting ideas. To get the material for these articles, the editorial staff is carefully covering all parts of Canada and gleaning ideas that have been tried out and found successful. This is important educational work and will, it is believed, justify the expense that is being undertaken. Another important educational service will be rendered in the way of articles by experts on the construction and handling of the lines the dealer handles— the kind of information he needs to sell intelligently and to give service to customers in the matter of maintenance and repairs.

However, let this, the first number, speak for itself. It represents a great deal of earnest, hard work but it is merely a first step. It can be promised that the service offered the reader will grow in value and scope with each succeeding issue.

NO PRICE DROP NOW

Farmers, and dealers too, who are refraining from buying implements in belief that prices will soon be lower are penny-wise men. Despite the fact that a great deal of instructional material has been published both in the trade press and the daily newspapers since the armistice to prove that there is no likelihood of a decline in prices for spring trade, yet many of the stubborn ones, or short-sighted ones, are waiting until the goods are actually needed.

Of course, it is admitted that prices will eventually come down, but they cannot be lower until the prices of farm products decreases in proportion. Wheat will have to be down to $1.25 or $1.50 before an intelligent dealer or buyer can expect to find the price of agricultural machinery drop to any considerable extent.

Farmers should be told now, as later, that it is impossible that they should receive top prices for their crops and livestock and also pay less for the things necessary to produce them. When prices are lowered it will be all along the line.

Farmers will soon be coming with a rush to the dealers, willing to pay the price demanded, when they find that they actually need these implements and tractors, and some dealers will be caught without sufficient stocks on hand to meet the demand.

KEEP OUT SUPERFLUOUS TYPES, NON-ESSENTIAL SIZES

—By Melvill, in "Farm Implement News"

THE DISTURBERS.

In his opening address to the nineteenth annual convention of the Ontario Association of Fairs and Exhibitions, which was held during February, in Toronto, Mr. J. Lockie Wilson, the secretary of the society, advocated standardized farm implements. "I do not think it is too much to demand that the Federal Government take prompt action to have particularly the breakable and wearable parts of all farm machinery standardized. Instead of half a dozen agents in a locality selling the parts of different makes of machines, one establishment would fill the bill, and time would be saved by prompt delivery," he declared.

ADVERTISE POWER COURSES

The Federal and Provincial Governments can do no better "missionary" work among the farmers and implement and tractor dealers in their territories than to encourage them in every way to make use of farm power machinery wherever the character of the work and the size of the farms warrant it. Ontario, Alberta, and one or two others of the provinces are holding, from time to time, short-course tractor schools, and there is at the present time an insistent demand from Manitoba that the Government there shall follow suit. An interesting article in this number of the CANADIAN MOTOR, TRACTOR AND IMPLEMENT TRADE JOURNAL, by W. H. Day, former Professor of Ontario Agricultural College, outlines the work which is being done by the Ontario Department.

BLENHEIM, ONT.
24-2-19.

THE MACLEAN PUBLISHING CO.
TORONTO

Sirs:

We are indeed pleased to learn that you will publish an IMPLEMENT TRADE JOURNAL, *as we consider the trade very badly in need of one, and we know that you will do it in the right way.*

We believe a Journal which reaches the different implement dealers can be used to great advantage as an Exchange Medium. . . . . Also, no class of merchant needs advice more than the Implement man.

Wishing you every success with your new JOURNAL,

Yours,
J. W. FLEMING & SON.

This letter, entirely unsolicited, speaks for itself.

But, a great deal of this work will go for naught if the respective Governments do not advertise broadcast, many weeks in advance, the time, location, and scope of each school. These advertisements, accompanied by descriptive write-ups, should appear in all trade papers, in the local newspapers and in all the weeklies in the farming territories surrounding the centre in which the course is given. In addition, a certain number of hand-bills and personal letters might well be sent out to those who are known to be especially interested.

This is particularly apropos of a letter which we have received from a well-known implement and tractor dealer in Western Ontario. This man writes that a day or two before a tractor course was to be held in his town, he was still in ignorance of the fact. A farmer dropped into his warehouse and asked him about the course and he was unable to give the desired information. A little later he received the information that such a course was to be held in his town, but it was not stated in what building the course would be given. It was not until the morning that the course actually started that he received full details about it, and then it was too late to get in touch with all those clients whom he desired to invite to attend.

Each Government Department must attend to publicity of this nature in a thoroughly efficient manner.

CHANCE FOR CANADIANS

Here is a chance for Canadian manufacturers. George Ford, head of the Red Cross reconstruction work in Paris, has listed the agricultural machinery needed by France as follows: 81,000 plows, 56,000 cultivators, 30,000 mowing machines, 115,000 farm wagons, 88,000 harrows, 50,000 rollers 48,000 hoes, 36,000 seed drills, 13,000 fertilizers, 16,000 beet extractors, 21,000 winnowing machines, 118,000 horse-drawn rakes, 32,000 reapers and binders, and 53,000 root cutters besides other farm implements. There are now no horses in the devastated portions of France, though there were 242,000 in 1915 and 607,000 in 1917.

TRACTOR INNOVATIONS

One of the most marked developments of the past year is the large increase in the production of small tractors, machines whose capacity is measured by the two-bottom, fourteen-inch plow. The appearance of the Fordson, in the four-wheel class, gave a decided impetus to the production of smaller and less costly tractors.

Thus, an interesting situation is forecast for the season of 1919, namely, a contest for popularity and economy of operation between the small two-bottom tractor and the machine of larger capacity. It is estimated that the output of tractors for 1919 in Canada and the United States will be close to a quarter of a million. One authority anticipates that nearly half of these will be of the two-bottom capacity. Last year more than 10,000 tractors were imported into Canada, and there is reason for the belief that this number will be considerably exceeded during the present calendar year.

A question to determine in the tractor trade will be the relative economy of two-bottom, three-bottom and four-bottom tractors. In other words, is the prime factor of economy in the capacity of the machine or in the skill and versatility of the operator?

NEW TRACTORS

During the past few months, or a year, very few departures from conventional types have been made in the old established lines by manufacturers of tractors. New models have been introduced, including two by the Case people; two by the Allis-Chalmers; one by the International Harvester; and small agricultural tractors have been added to their lines by the Hart-Parr, Advance Rumely, Port Huron, Aultman-Taylor, and the Minneapolis Steel & Machinery Co.

In the accessory lines there has been a general adoption of an air cleaner of some kind for tractors, which will be used primarily for tillage purposes. A decided innovation was the adoption of the electric control and starter device on the Moline-Universal. Another innovation was the installation of a starting device on the Lauson tractor. Special mention should also be made in this connection of the thermostatic temperature control to facilitate the burning of kerosene in the Case tractors.

Service---A Western Business Story

By M. L. Southall

A SUCCESSFUL business enterprise in the selling of farm implements, tractors, etc., is, like any other business undertaking, the result of years of study, the application of modern business methods and a practical insight into the needs of the farming communities. Such has been found to be the case by McLeod & Hanbury, implement and tractor dealers of Brandon, Man., and the success with which this business has met is best illustrated by a comparison of the two pictures showing a development covering a period of twenty-eight years.

In 1891 an Indian village was located near the present prairie city of Brandon, Man. It was at this time that the McLeod and Hanbury partnership was formed to deal in farm implements. Settlers were coming to the West in those days and trade in implements was starting. The home-made wooden plow was in vogue, this implement being hewn from a log of birch by axe. Farming methods at that time were necessarily slow and laborious, and for some years later this condition existed, the wooden plow having been seen in use as recently as twenty years ago.

The older picture of the two shows the first McLeod & Hanbury warehouse in Brandon, which was later razed to permit the construction of the present up-to-date warehouse shown in the other photo. In the former picture are shown some of the first buggies which came to Brandon—the old style, picturesque type with fringed canopies. Mr. Hanbury is shown wearing a Christy and standing in the doorway of the warehouse, while Mr. McLeod is sitting on a plow. While the members of the firm have aged a little since this picture was taken, both are still active in business. Mr. Hanbury mourns the loss of his son, Captain Hanbury, who was killed in action in January, 1918.

The latter picture shows a recent view of the McLeod and Hanbury establishment, in which Mr. Hanbury is seen standing by the wagon and Mr. McLeod is at the extreme right.

As it looks to-day

"Service" the Motto of Success

Business conditions in the implement trade are to-day governed by circumstances vastly different from those which existed in the years when the implement trade had its inception in the West, but throughout the past twenty-eight years McLeod and Hanbury have kept pace with the times and have maintained a steady and successful business growth by giving SERVICE to the farmers. Service represents a great deal and, with the advent of modern conditions in farming, making necessary the use of up-to-date implements for tilling the soil and harvesting the crop, the farmer is realizing the meaning of Service from the trade.

"The implement dealer *must* give Service to get and keep his trade," says Mr. Hanbury.

In this particular case Service consists of giving mechanical attention to all implements sold, for the entire period of their usefulness. This involves sufficient work for the employment of one man's entire time. Mr. Hanbury compares this interpretation of Service with that given by dealers who are "here to-day and gone to-morrow," who promise the farmer anything to get his order and then leave him helpless when some minor mechanical attention is required to keep his implements working.

The city of Brandon has had its share of experience with this type of agent and, in comparison, the adequate service rendered by McLeod and Hanbury has stood out prominently.

Some of the business methods followed by this firm are worthy of note.

Stock Purchased Outright

Firstly, this firm carries its own stock of implements and buys them outright. As there often is considerable confusion regarding the laid down cost of implements on a customer's farm, owing to the extent to which the agent's commission might be cut to bear some of the "incidental" expenses in transporting the implements into the country from the agent's warehouse or from the nearest distributing centre of the manufacturer, it has been found that there is much less complication where the agent can purchase outright. In this way the agent has his implements laid down at his own warehouse at a certain cost, and from there he can figure his additional costs for delivering to his customer's farm and thus know exactly what price he will have to charge the farmer and what his percentage of profit will be on the deal.

Furthermore, this plan helps to avoid complications where manufacturers' representatives come into the dealer's territory and endeavor to work up business direct. These difficulties are increased where two or more local dealers are angling for the business and a matter of a few dollars difference in price will decide which one will secure the order.

As it looked early in the 'nineties

All Sales Made On Warehouse Floor

McLeod and Hanbury have a splendid warehouse for showing implements, and pamphlets descriptive of the various farm necessaries are generally distributed. The business of this firm is of such a character that sales are made direct from the floor of the warehouse and no soliciting throughout the country is done. The only man on the road is the Service Man. Mr. Hanbury states that he has not been off the warehouse floor for more than ten business days since commencing business.

No particular line of implements is handled throughcut, this firm having followed the plan of sounding out their customers concerning the merits of various lines and handling those which they know will give best satisfaction. Mr. Hanbury can name the manufacturers of each particular type of implement which is most successful in practical use under farming conditions existing in his territory. Of course these conditions differ in various communities. This information he secures in a casual manner while conversing with prospects.

As regards conditions of sale of implements, this firm sometimes does a cash business when dealing with some of the more wealthy customers, but the majority of sales are made on a small payment down and the balance in the fall when the crop is harvested.

The sending of pamphlets and booklets to prospective customers has been found to be a great help in the sale of implements. In most cases these booklets give illustrations of various implements and explain their use. These are published by the manufacturer and are sent to lists submitted by the dealer, at the latter's own expense for postage only. Mr. Hanbury points out that this plan is exceptionally helpful in rural districts in assisting to work up prospects.

The sale of tractors in Brandon district will be large in the near future. The scarcity, and high cost of labor are two factors which are expected to boom tractor business. The farmer to-day is developing more of a mechanical turn of mind and in many cases has made such a study of engines that he can soon establish the good or bad mechanical points about his machinery. For this reason the tractor salesman to-day must watch that he does not exaggerate his claims in dealing with farmers.

Some years ago McLeod and Hanbury represented automobile manufacturers. In this connection it is interesting to note the reason why this firm has not combined the sale of automobiles,with tractors and implements.

Mr. Hanbury points out that only the wealthiest farmers can afford both tractor and an automobile. In many cases it is a matter of choosing which will be purchased. In selling an automobile the agent has the support of the wife and children and must interest the farmer. In selling a tractor the agent generally has an interested hearing from the farmer and perhaps

Continued on page 14

BUYING *and* SELLING ACCESSORIES

By C. DIXON

Of Hyslop Bros.

EVERY automobile dealer, automobile repairman and garageman should count on getting a large proportion of total income from the sale of automotive equipment, embracing accessories, tires and supplies for automobiles, trucks and tractors. The season of 1919 offers greater opportunities than 1918, or ever before, because there are 70,000 more car owners and all the old motor cars, after another driving season, require extra repair parts and supplies. The dealer is the only satisfactory outlet and source of supply for the car owner.

During the last year or two a great many writers and speakers have handed out much advice in a general, indefinite way to dealers telling how and what should be done to improve their merchandising methods, the handling and exhibiting of stock, in order to conserve and save more nickels out of every dollar's worth of sales. I fear some repetition, but will try to suggest briefly and pointedly specific methods that can be adopted to advantage.

Probably the biggest problem is sales, and sales depend on proper buying. This means you must have a sufficient assortment of stock to take care of your car-owner customers' needs and give prompt service. If your present stock is low and you have not bought your spring stock, get on your toes at once, as otherwise you will be out of the running.

Prices on automotive equipment are likely to remain at present levels for the entire season. The firm with which I am connected have carefully searched the raw material markets and factories in Canada and the United States, but there is nothing whatever on the horizon to indicate a reduction in prices for at least the next six or eight months—and even then no sweeping changes are likely. The trend of events in the next three or four months may give some indication of price possibilities for 1920 buying, but for the 1919 season jobbers and distributors can find nothing to indicate any serious reduction in the price of these goods.

EVERY dealer should plan his buying in proportion to the number of each article he sold during the past season. This can be accomplished by keeping a sales record of each article, or from invoices. By keeping a simple stock record of the quantities of accessories sold during the season you can form a correct basis for buying for the following season. You will know exactly the proper quantities to buy and the proper time to stock certain seasonable lines which have not a regular sale.

When buying your stock, proper consideration should be given to the demand for such an article in your locality and the quantity limited to the extent of your ability to make quick turn-overs. It is advisable to carry an assortment or complete line of accessories, but carefully avoid an over-stock of any one item which costs money in the way of interest and discounts, soiled stock and other increased expenses. Over-buying and slow sales are the greatest enemies to the turn-over. Over-stocks tie up profits and for the coming season the dealer can more safely plan to operate with a smaller quantity of each article of stock and buy oftener than during war time seasons.

In deciding the lines of accessories to put in stock, the best guide is to take into consideration the number of car owners in your territory, and then ascertain how many cars there are of each make. When you know how many Fords and how many Chevrolets and other makes are in your territory, you can better decide on proper quantities to buy. Due allowance should be made for the number of customers controlled by your competitors, then you can fairly correctly determine sales possibilities, and the quantities and kinds of accessories to buy should be in accordance with customers' and prospective customers' cars. Do not allow yourself to be stampeded by some salesmen into buying heavily in order to get a price on some new-fangled, untried device. Better line up with some reliable jobber, who has a few years' experience in sorting out these new offerings and who handles most of the standard lines.

You can do a great deal at the present time to maintain a feeling of confidence on the part of customers and car owners. If the car owners find that you are not buying goods, on the expectation of a decline in price, they, on their part, will refuse to buy for the same reason.

Many car owners have already overhauled their motor cars or will very soon start the buying stream and their needs must be supplied from someone. You can, to a large extent, create your sales market before the buyer arrives at your store.

More time and thought should be given to increase sales by every possible legitimate method. One way is to keep your customers and prospective customers well supplied with reasons why he should buy your goods. Many car owners do not know the uses of certain articles or are not aware of their existence. This sales effort can take the form of personal solicitation, catalogues, price sheets, circulars and the other many advertising and selling plans. Give your customers plenty of reasons why they should buy and you stand to get an order sooner or later.

A whole train-load Case 10-18 Tractors leaving Racine, Wis., for Canadian Fairbanks-Morse Co., Toronto.

FROM the writer's experience with the retail business he is satisfied that the best time to sell accessories and extra supplies is the moment after the new car has been sold. The new car owner is delighted, or should be, and is in a very favorable mood to receive your suggestions that he provide a set of tire chains, tire irons, grease gun, hydrometer, set of extra bulbs, tools, bumper, spark plugs, jack, clock, seat covers, a can of oil and grease, wheel puller, spare tire, tire cover, fuse plug mirror, cleaning materials and brushes, and many other articles that will suggest themselves.

In case you are not doing so, the time is now ripe to put your repair bills and entire business on a cash basis. Your gross profit on accessories will average from 20% to 35% on sales or 25% to 50% on cost, which will not provide for bad debts. On a cash basis the banker will lend more money on the strength of your financial statement and because such position will enable you to pay for regular purchases and take advantage of any special opportunities. You will also avoid many unpleasant interviews with customers in collecting unpaid bills. In order to purchase goods from the right markets and at the right prices, you require cash sales, as open, unpaid accounts will not buy new, fresh stock.

It is also imperative that you sell at full list prices —no cut prices, discounts or other deductions—such as fitting or installing accessories "no charge." In almost every case the goods are worth the price that has been fixed on them and should not be sold at any other. Once you make a special or cut price on an article it is very hard to reinstate correct prices, and not only is the profit on that special sale lost, but the profit on after sales as well. Get your price and don't let your customer beat you out of a nickel here and there on the purchase of his motor car supplies.

THAT leads me to consider the actions of competitors. If you believe it necessary to sell goods at cut prices because of competitors' actions, then I recommend the need of trade co-operation with your competitors. If you live in Ontario, join the Retail Automobile, Garage and Accessory Dealers' Association. That organization is sub-divided into several local town associations. The other provinces will also be better organized at an early date, it is expected. One of the outstanding lessons of the Great War was the great advantage in organization. For several years past all combines or organizations on the part of manufacturers, wholesalers and retailers were looked upon in most cases with suspicion. That was due largely to the fact that a few individuals have brought the name of "Associations" into disrepute through the fixing of prices and throttling trade in various ways. To-day most manufacturers, wholesalers and retailers realize that when they get together the most important or desirable thing is not to fix prices, but to eliminate wasteful methods, to compare systems, exchange plans, arrange for road and highway improvements, discuss and spread better trade methods and incidentally raise by education and conference the status of any "lame duck" or inexperienced dealer, if there is one in your locality.

A discussion along the lines of the cost of doing business will in most cases cure the price-cutting habit. Know your cost of doing business and if your competitor is selling a standard article at a cut price, go to him in an open-minded way and show him where he is losing money and make him a friend. There is no need for competitors to be enemies and fair competition means co-operation. Through co-operation much antagonism and suspicion can be wiped out by associations giving publicity to the objects of their organizations and the good which they are able to accomplish.

I understand that collective price-fixing is not only unlawful, but is considered unnecessary by associations. Go at it from the other point of view and educate your competitor by showing him how to find the gross profit on the sale of auto accessories and how to find his cost of doing business. By helping him arrive at the cost of doing business and facing the gross percentage of profit with naked eyes the incentive to cut prices is wiped out, as the net profit will certainly not permit him to stay in business and sell automobile accessories. An association, either local or provincial, can be of immense advantage in introducing many other reforms. When you join, be active, suggest and start something. At one time or other nearly all get caught with an over-stock of a line of goods—probably the local market will not absorb the goods, but through the medium of your association very often some other member can use the over-stock and will pay at least the cost for it. The association should work in this and similar ways. I specially appeal for you to organize and associate with men of like purpose and same line of business. The weakness of individual action and the result of co-operation will never be better exemplified than during the progress of the Great War so nearly closed.

THE necessity of properly displaying accessories is important. Show cases or sloping shelves are necessary. Take advantage of your windows

In conclusion do not overlook the every-day-of-the-year stability of the accessory business. The average gross profit, the immense possibilities for present and future sales are worth your time and effort. The sales possibilities of your territory or locality can be visualized by multiplying the number of car owners by a minimum of $60—the average yearly purchases of accessories per car owner, and this figure would not include tires or gasoline.

Putting Across a Tractor Sale---Right

A Playlet in Two Cylinders With One Cylinder Missing

ILLUSTRATED BY WM. CASEY

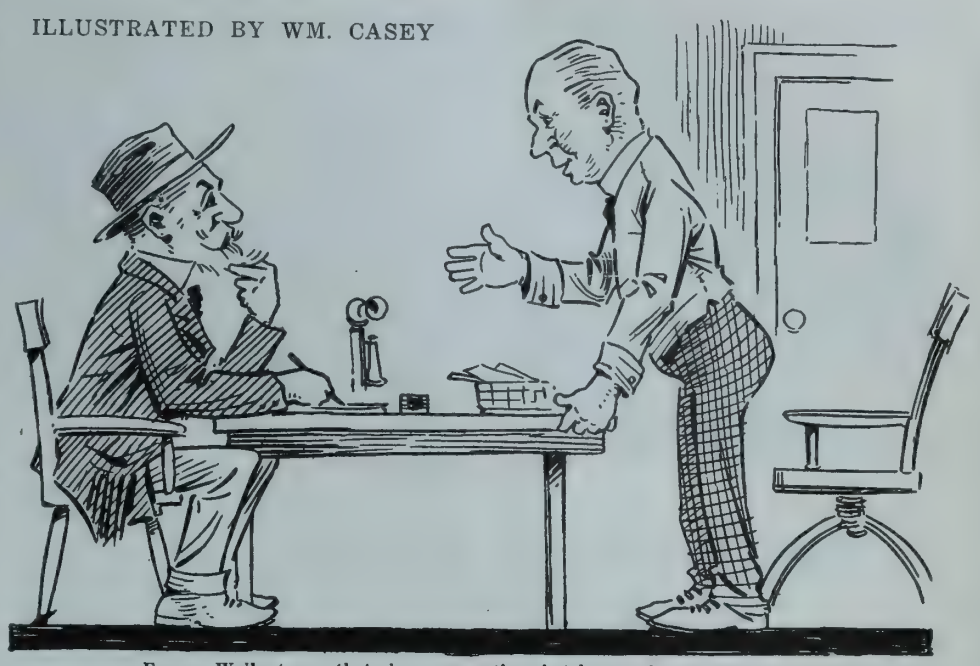
A NOVEL method of showing the dealer the worst and the best methods of selling to the farmer was tried out at a recent Western Tractor Convention, and made a big hit with all those present. In Act 1, of the playlet entitled, "A Lecture in Tractor Salesmanship," Dealer Kimmell and Farmer Collins gave an exhibition of how tractors should *not* be sold.

After some jocularities that waste both their times, the dealer cracks up his tractor, says everything about it is the "best in the world," agrees to cut the price, offers to throw in oil and accessories, and finally delivers the tractor without any cash payment down. The dealer tells the farmer that ten pints of oil will last him all season.

The farmer tries it, doesn't give it enough oil, doesn't know how to run it, and gets his arm badly damaged. He returns to Dealer Kimmell, thoroughly disgusted, tells him he must take the tractor back. It ends up by the dealer taking back the tractor, though of course much against his will, and the farmer makes his exit saying, "You'll never sell another tractor in this neighborhood if I can help it."

What a picture in bad salesmanship this little act is!

In Act 2, Dealer Hitchcock, a competitor of Dealer Kimmell's, is seated at his desk. He has heard that Farmer Collins' tractor has been relegated to the fence corner. Enter Farmer Walbert:



Farmer Walbert sees that cheque mounting, but knows the tractor will be worth it.

Candor Pays Dealer

DEALER: What's on your mind, Mr. Walbert?

Farmer: I'm looking for a bargain.

Dealer: You struck the right spot.

Farmer: I want a light tractor that will pull a four-bottom plow.

Dealer: They don't make them.

Farmer: The books say they do.

Dealer: The books say lots of things. How many acres have you?

Farmer: A hundred and sixty.

Dealer: You don't want a four-bottom blow. Take an 8-16. So many fellows buy small tractors. My experience in selling a man tractors shows they don't always perform according to the claims.

Farmer: Have you a guarantee on your tractor?

Dealer: No, we want to sell something that we know there will be no comeback on.

Farmer: Don't you throw in ten gallons of oil?

Dealer: No.

Farmer: Look at what this tractor will cost me.

Dealer: You make a lot of money on your products.

Farmer: To get back to this tractor. Your book says it pulls a three-bottom plow six inches deep.

Dealer: That's a mistake. It won't do it under ALL conditions.

Farmer: Why not?

Dealer: In some soils you might get by with three-bottoms.

Farmer: You are trying to slip a big tractor off on me at a big price.

Dealer: I want to sell you something that will be satisfactory to you.

Farmer: You are trying to make a lot of money off of me. You and I are pretty good friends, and I want to buy this tractor right.

Don't Over-Estimate Capabilities

Dealer: I want to sell you this so you will be a good friend of mine. The motor of this tractor has removable sleeves.

Farmer: What do you want them for?

Dealer: In case they wear, you can remove them and get new ones.

Farmer: Why is that? I heard a fellow say that a motor wouldn't wear out in ten years.

Dealer: Did you ever hear of anything that didn't wear out?

Farmer: Tractors will wear a little, of course.

Dealer: I can't sit here and tell you a tractor will not wear out.

Farmer: What about this 12-25? It costs more money.

Dealer: Not much more.

Farmer: Will you guarantee this 12-25, that it will pull a three-bottom plow under ordinary conditions?

Dealer: Yes, sir.

FARMER: Suppose it doesn't pull it.

Dealer: We'll make it pull it. I'll give you an independent plow to go on there. The manufacturers say it will pull four, but I say it will pull three.

Farmer: If anything goes wrong with the engine, what are you going to do?

Dealer: It depends upon what's wrong. I want a man to show a little common sense. I don't want a man to go to the phone and ask me to come out and fix a spark plug.

Farmer: Suppose I can't start the tractor in the morning and it is a little bit cold, are you going to send a man out?

Dealer: Not until you have fought it out. You know about running automobiles.

Farmer: What have you to say about the sparking device? The other fellow said to advance it.

Dealer: He should have said "Retard it."

Farmer: What does this one cost?

Dealer: $1,400.

Farmer Collins, with arm in a sling, has a badly damaged temper, too, over his tractor fiasco.

Farmer: That is too much money.

Dealer: You pay $1,800 for an automobile.

Farmer: Well, look at what I get! Maybe I can't start the tractor.

Dealer: You can start it.

Farmer: How much time do you want to give me?

Cash—All Of It

Dealer: Write me out a cheque for it.

Farmer: Oh, no. I'll pay you $1,200 for that tractor, and pay you half cash, if you give me time on the other half.

Dealer: I can't do that. We have to pay for them.

Farmer: You have lots of time on them.

Dealer: We have time to write a cheque. That's all.

Farmer: Don't you get about three months?

Dealer: No, sir; we don't get anything.

Farmer: I'll have to have time on part of it.

Dealer: I can't give it to you.

Farmer: I buy wagons on time.

Dealer: The time is coming when you are going to pay cash for all this stuff.

Farmer: You give me a little time, I'll pay you $800 and give you a note for the balance in 30 days.

Dealer: No, I can't do it. Another thing, you should have a guide.

Farmer: Going to hold me up again? How much does that cost?

Dealer: About thirty-five dollars.

Farmer: What are these guides for?

Dealer: They'll save you a bit of time and hard work in steering.

Farmer: Well, Charlie, I don't believe I can buy. I can't pay all cash.

DEALER: Now listen! It will take about half a gallon of lubricating oil a day.

Farmer: Won't ten gallons run it a whole season?

Dealer: Not on your life!

Farmer: You offered to sell me this tractor at $1,200 a short time ago, half cash.

Dealer: Well, we've had a war. I'm paying you now 65 cents a dozen for eggs.

Farmer: I haven't enough money to buy this, all cash.

Dealer: You can go to a bank. Any bank will lend you money to buy a tractor. Borrow it at six per cent.

Farmer: You think they'd let me have the money?

Dealer: Sure they will.

Farmer: Well, maybe I better buy it.

Dealer: Sure. Write me out a cheque.

Farmer: Right now?

Dealer: $1,400.

Farmer: Can't you throw in these rims?

Dealer: Can't do it.

See the Cheque Climb

Farmer: Let me have this steering apparatus.

Dealer: Can't do it. I have to get that price.

Farmer: What about this guarantee?

Dealer: We will guarantee the tractor to run under ordinary conditions, providing you use proper judgment.

Farmer: What service will you give me?

Dealer: We'll go out with you and start it at our own expense, and satisfy you that it will operate satisfactorily, but we expect you to use ordinary judgment. Every time anything gets out of the way, don't 'phone us.

Farmer: Will I have to pay you fellows to make these trips?

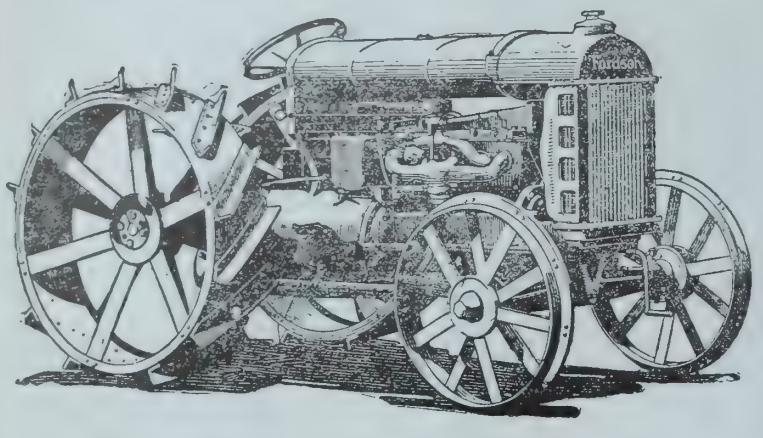
Continued on page 14

A Talk on "Good" Advertisements

With Specimens of Tractor Advertising

By H. A. NICHOLSON

Business Manager of "Printer and Publisher."



Repair Service to Fordson Tractor Owners

A VERY serious qestión for the prospective buyer to consider is the question of repairs.

When the seeding or harvesting season is on, every hour counts. If the tractor should have to lay up for any considerable time because of some disability, the farmer is in a bad fix.. Right here is where the words "Ford Service" have such impressive meaning.

Every farmer knows that the Ford dealer is not far away. If he owns a Ford car he knows the Ford dealer and he knows how convenient and valuable is Ford Service.

This same convenient, satisfactory Ford service applies also in the case of the Fordson Tractor.

We will carry a full supply of FORDSON TRACTOR parts and are prepared to make quick repairs and renewals of parts.

Specially trained Mechanics will be assigned to these Jobs.

There are more than seven hundred Ford dealers in Canada at your

Manley & Slater Auto Co.

606 Main St - - - Moose Jaw

Nearly all the generally recognized essentials of good display are seen in this advertisement. The illustration is placed to the best advantage and the generous margin of white space used between the border and the body matter gives the whole arrangement an attractive and pleasing appearance. The tone effect is uniform, too, the display type, border and illustration being all about the same weight, a feature worth regarding in all advertisements. There is room for improvement, however. The initial might have been raised up to better advantage, thus giving the text a better start. Long lines make tedious reading. Reading the text from the second paragraph down this portion of the advertisement would have been easier to read if arranged in two columns., Or the whole of the text matter should have been indented, and in this case the heading would then have to be spread out to the same length as the signature. Another slight fault is found in the address; this is a trifle large and out of balance. A mistake is also noticeable in the spelling in the first line of the text.

EXTREMELY few people will take time or trouble to study advertisements. At the most they are inclined only to give them a passing glance. Therefore advertisements to prove effective must in the first place possess elements that attract and please the eye of the reader. Then they must contain an interesting message. The message must be put simply, plainly; it must be presented in a manner easily understood.

Advertisements by the score, in the daily papers, weekly papers, trade papers, magazines and all other advertising media too frequently lack these essential elements with the result that much good advertising space is going to waste.

Primarily the fault lies with advertisement writers —who are, in too many cases, persons not learned in the art of the profession, or who are only superficially learned.

The ad. writer has it within his power to produce advertisements that have the necessary essentials of success. If he knows his business thoroughly, he can draft out an advertisement on paper in such a manner that nothing is left to fall as prey to the idiosyncrasies of indifferent compositors.

However, since there is so much poorly written and arranged advertising the world over, the field of opportunity for skill on the part of the compositor is big and broad. This article is particularly concerned with the compositor, not with the ad. writer, so we will give our attention to the compositor's part in the production of an advertisement. This is mainly typographical display.

Advertisements we see appearing in the metropolitan papers and magazine are, in a great many cases, carefully drafted and arranged by proficient ad. writers when handed to the compositor to set-up. This leaves very little room for the compositor to display his skill. It is similar to setting a reprint ad. to him. Yet the great majority of advertisements are not prepared in the first place by professional copy writers and in view of the practice greatly in vogue to-day, it is in the hands of the compositors that the fate of this great majority of advertisements rests.

LET us consider the part the compositor presumably played in setting the Hugh Rorison advertisement of the Case & Emerson Tractor herewith illustrated.

It is not a particularly poor example of typography. It is as well displayed as the majority of advertisements of its kind. An obviously poor typographical display would not serve the purpose so well in making our point. What is desired is something that is representative of that class of advertisements which are generally conceded to be quite the thing when in reality they possess features that are opposed to the correct and most effective methods of typography.

This Case & Emerson ad. is over displayed. That is one point at fault. "Too much display means no display." We are inclined to liken overdisplay to a street corner "orator" we once knew who proved extremely amusing because of his incessantly loud talk. He could be heard for several blocks and he may be given credit for attracting a crowd. Nobody however was able to understand "Shouting Jimmie's" line of talk, as it was called, or cared to understand it. It was monotonous and displeasing to the ear. There was no attempt made at emphasis in the important points of his oratorical efforts. Everything he said was at top pitch, "overdisplayed," consequently there was no room for contrast and no room for emphasis. His efforts were more or less a failure.

Daniel Webster, it is said, fairly lifted his audience out of their seats through a single well-chosen phrase timely and strongly emphasized. What applies in oratory may be said to apply in a measure to typographical display. It's a good thing to remember that "one at a time is good fishing," even in displaying type.

In this advertisement we have under discussion there was no necessity for displaying "Case & Emerson Tractors" over the illustration and then practically repeating the process immediately beneath the illustration. If these words must appear, why could they not have been put in quarter the size used? The other display lines would then have stood out more plainly by virtue of contrast. The ad. would thus have been easier to read and more inviting. This might appear to be a trivial point, but those who watch results will tell you that is upon such points advertisements succeed or fail.

NOW let us turn to the illustration. It is a good one and is bound to attract every reader who is interested in farm machinery.

Let us concede that the illustration is the first thing that draws attention to the advertisement. Where does the eye travel after that? Either up or down, usually down, but probably to the largest display line. In this ad. the eye is puzzled where to go. We are inclined to believe that the eye in this case follows the line of least resistance and travels down. Does it afterward travel up to the top of the ad.? It may. But the eye never likes long journeys—decidedly not in traveling over advertisements.

The place for this illustration was at the beginning.

Of course, there is no rule to say that all illustrations should take the foremost position in all advertisements but in many cases it is preferable. This is one of them.

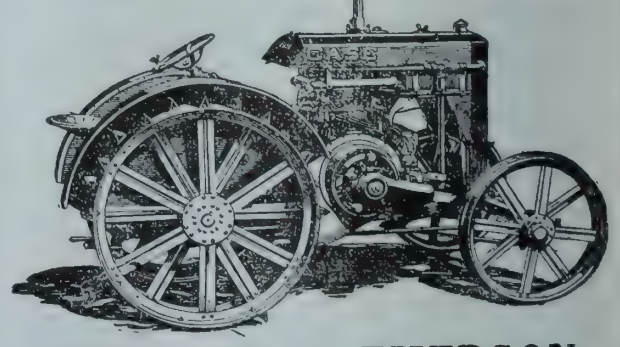
SIMPLICITY THE KEYNOTE

Let us emphasize that simplicity is one of the great essentials to the pulling power of an advertisement, whether it be in its general appearance or its word ing. This fact has been proven in respect to the

Is An Enclosed Drive Gear Necessary on a Tractor?

Suppose an automobile had the gears exposed, how long could it be run? When it comes to a tractor, is this not more necessary?

Case & Emerson Tractors



OUR CASE & EMERSON

Tractors have all drive and other gears enclosed and running in oil. The air is strained before reaching the carbureter, keeping the sand and dirt from the cylinders.

THERE ARE MANY OTHER EXCLUSIVE FEATURES

Let us explain them. Samples on our floor.

REMEMBER that these are strong, reliable companies with a reputation for Quality Goods. They have not been formed over night as a sales organization only

LOOK AHEAD FOR YOUR REPAIR SERVICE

Sizes 10-18 12-20 15-27

HUGH RORISON

Phone 1055 42 Manitoba E. Moose Jaw

This is the ad as it appeared in a Western newspaper, but here it is reduced in size to meet exigencies of space. On page 14 it has been reset by Mr. Nicholson, in same size as it originally appeared, and according to the ideas of the writer of this article as to what it could look like.

Sell the Farmer What He Wants

What a man **needs** he **wants.** He is paying for it whether he gets it or not—sometimes in extra labor and time, which means, of course, extra expense.

Above all things the farmer needs cheap, dependable power. He is already sold on that proposition. Anything less means a narrower margin between income and outgo. Climbing land values must square with heavy yields and reduced expenses. Cheap power is the solution.

The dealer selling **International and Titan kerosene tractors** sells simple and durable machines that operate on low-cost fuels. They are designed and built for the one purpose of supplying cheap, dependable power for farm work.

Behind the dealer selling Internationals is all the prestige and good-will of an organization that for nearly a century has studied farm needs and worked for farm efficiency and economy.

These things count big from a sales standpoint. The satisfactory experience of generations of farmers with the International standard of quality and service gives them every reason to believe they will get both quality and service when buying an International kerosene tractor.

This is your opportunity. A contract to sell something that has a market already waiting is certainly a valuable contract. Speak to the blockman about it the next time you see him, or write us at the nearest branch house.

International Harvester Company of Canada, Limited

BRANCH HOUSES

WEST—Brandon, Man., Calgary, Alta., Edmonton, Alta., Estevan, Sask., Lethbridge, Alta., N. Battleford, Sask., Regina, Sask., Saskatoon, Sask., Winnipeg, Man., Yorkton, Sask.

EAST—Hamilton, Ont., London, Ont., Montreal, Que., Ottawa, Ont., Quebec, Que., St. John, N.B.

wording by a well-known correspondence school of a test of the words "Increase Your Salary," and "Increase Your Income." An advertising campaign in a certain field was carried on with the headline bearing the words "Increase Your Income," appearing in the advertisement. After a given length of time the headline was changed to "Increase Your Salary." Both advertisements ran for the same length of time, under the same conditions and with the same wording and appearance with the exception of two alternating words, "Income" and "Salary." Which produced the better results do you suppose? The advertisement bearing the word "Salary" produced just twice as many replies as the advertisement bearing the word "Income." Both words were calculated to convey the same meaning but "Salary" is simpler, its meaning clearer for the purpose intended and consequently it caused people to pause, read and consider, who would otherwise not take time or trouble to grasp the rather vague meaning conveyed by the word "Income."

What is true of simplicity of wording is no doubt true in respect to simplicity of the general arrangement of an advertisement, speaking typographically and otherwise.

PUTTING ACROSS A TRACTOR SALE—RIGHT

Continued from page 11

Dealer: You want to learn how to run it.

Farmer: Listen! Charlie, suppose I can't start the thing. Must I pay you to come out and start it up?

Dealer: I wouldn't want to sell you that kind of a tractor. Write me out a cheque, here. And remember, there is $47 freight.

FARMER: Won't you pay the freight?

Dealer. No, sir. All prices at the factory. Let's see, that $35 for the guide, and there's the rim, and—

Farmer: I had better write this cheque out before you get any more. You are doing too much figuring.

Dealer: Just $1 631, all together.

Farmer: I won't do it.

Dealer: Come on. give me a cheque. I'll get the boys to tune up the engine. And, say, you should have a barrel of oil. You can't run this thing without oil.

Farmer: You sell oil?

Dealer: In 50-gallon barrels. It will cost you about 70 cents a gallon.

Farmer: Figure it up and I'll take it.

Dealer: That makes $1.700.

Farmer: Charlie, you are stinging me.

Dealer: No; write out your cheque.

Farmer: I am stung.

Dealer: No; if you were, you wouldn't write that cheque out.

Farmer: For some reason I am writing it; I don't know why.

Dealer: You have to have some confidence in the fellow that you are buying a tractor from.

Farmer: You bet your life, I know you, I'll know you better after I get through with this tractor. Don't you forget to come out and see me.

Although the women have not attended the recent tractor schools held at Guelph and Kemptville, Ontario, yet their sisters in Western Canada and in certain western states are getting ahead of them in running farm power machinery. Recently in Wisconsin the women were taught to run a simplicity tractor about the fair ground, and were given a thorough instruction in the mechanism, so that at the conclusion of the instruction several of the young women present handled the tractor with ease. About 80 young "farmerettes" attended this course.

* * *

Statistics show that motors running over concrete roads will use less gasoline than those over an earth road. Tests have shown that a gallon of gasoline will take a loaded two-ton truck 5.78 miles over an earth road; 7.19 over the fair gravel road; 9.30 over a good gravel road; 9.48 over a bituminous macadam road; 9.88 over a brick road; 11.78 miles over a concrete road.

* * *

SERVICE—A WESTERN BUSINESS STORY

Continued form page 9

from sons who are anxious to lighten their labor, but in most cases the opposition of the wife and girls is a big factor.

"When an automobile agent gets the farmer's family packed in the car on a joy ride and the wife is at the wheel, the deal is as good as closed," says Mr. Hanbury, "but you cannot use this factor in selling a tractor, though the fact that the latter is more of a practical business help than a motor car impresses the farmer to a greater extent, and after all he is the man who signs the cheque."

Mr. Hanbury realizes, however, that usually the motor car means more than pleasure to a farmer.

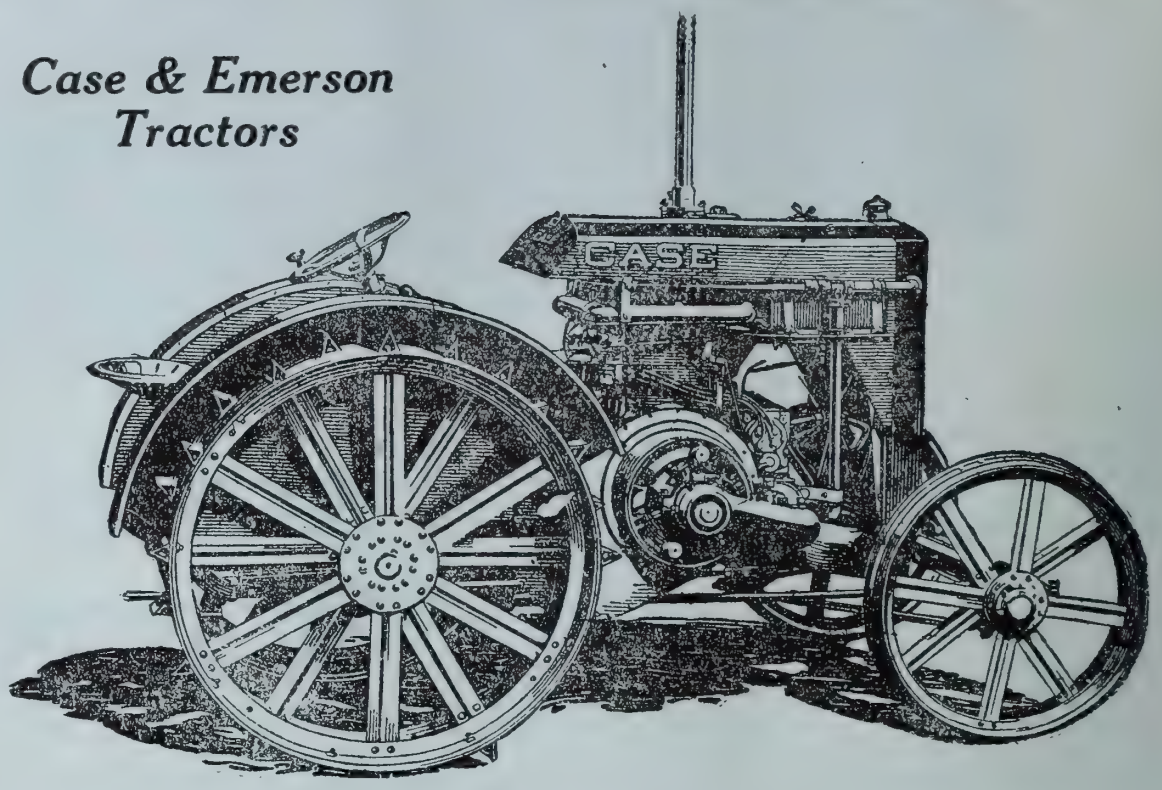
The question of Service enters again into this phase of the matter, and experience has proved that better business has resulted by confining their energies to implements and tractors, because of inability, through lack of help and floor space, to give maximum service if both automobiles and farm implements are handled.

Gasoline Sales a Source of Revenue

With tractors coming into more extensive use there is a good opening for implement dealers to increase their revenue by selling gasoline to farmers. The general plan followed is for each farmer to have a barrel for gasoline in his barn, which is kept filled by the "road agent," carrying gasoline in barrels. In this manner one Brandon dealer sold over 11,000 gallons of gasoline to farmers in a recent five-month period.

Mr. Hanbury thinks there is a great future in store for the implement and tractor business, especially when the readjustment period is completed.

Case & Emerson Tractors



Is an Enclosed Drive Gear Necessary on a Tractor?

Suppose an automobile had the gears exposed, how long could it be run? When it comes to a tractor, is this not more necessary? Our

CASE & EMERSON

Tractors have all drive and other gears enclosed and running in oil. The air is strained before reaching the carburetor, keeping the sand and dirt from the cylinders.

THERE ARE MANY OTHER EXCLUSIVE FEATURES.
Let us explain them. Samples on our floors.

REMEMBER that these are strong, reliable companies with a reputation for Quality Goods. They have not been formed over night as a sales organization only.

LOOK AHEAD FOR YOUR REPAIR SERVICE
Sizes 10-18, 12-20, 15-27

Hugh Rorison 42 Manitoba E. Phone 1055 **Moose Jaw**

The reset ad—for contrast look back at page 12

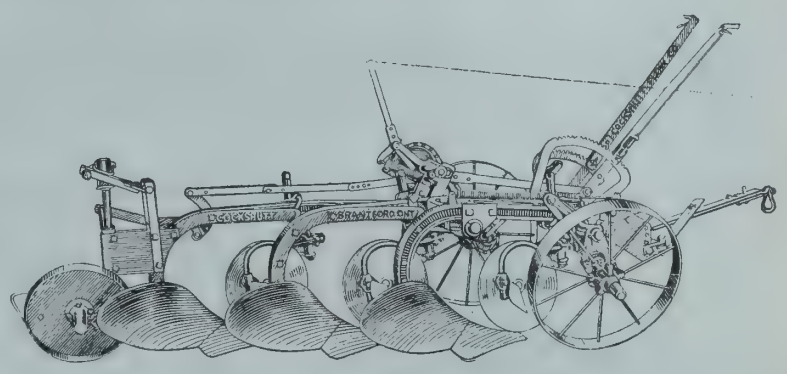
COCKSHUTT IMPLEMENTS

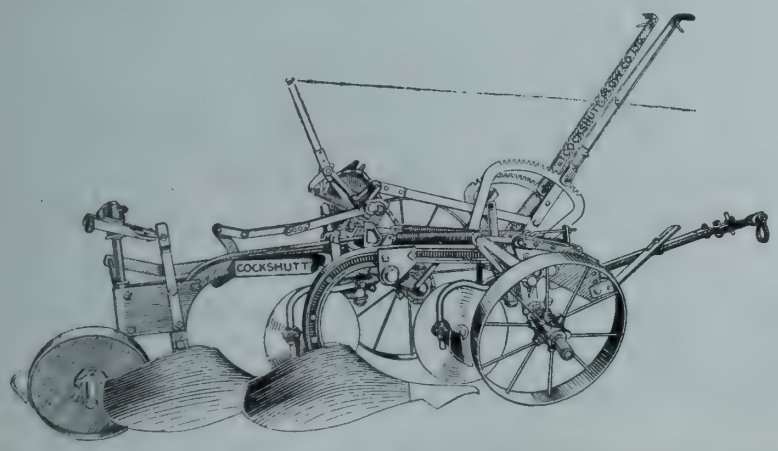
The Dealer who wants to succeed in the Agricultural Implement business should make just about one choice of a line in his career. Chopping and changing about doesn't inspire confidence amongst your customers. Choose the Cockshutt Line and you get a lifelong combination of completeness, co-operation, service and value that will build a big, permanent business for you.

COCKSHUTT

3-Furrow Light Tractor Plow

An admitted success wherever power plowing is done. Can be quickly turned into a 2-furrow plow when necessary. Cord within easy reach of operator's hand works automatic power lift, raising bottoms high and level when necessary. Light in draft because of Cockshutt superiority in design and materials.





COCKSHUTT

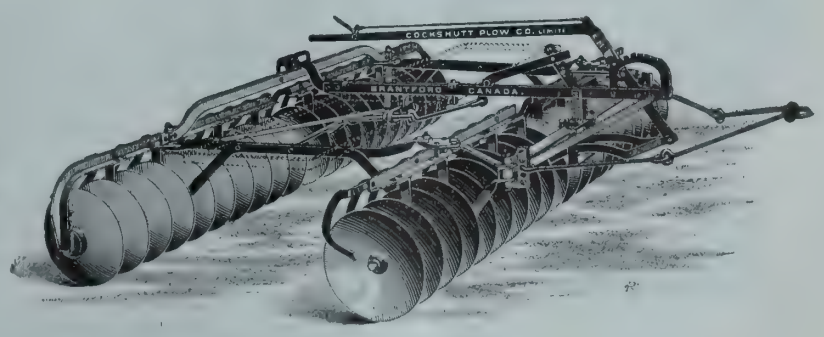
Double Disc Harrow

One of the best investments for a "power" farm. Composed of two sections of out-throw and two of in-throw harrows securely joined and controlled by one lever only. Square axles for disc sections guarantee proper discing; ball-bearings, disc scrapers and right design ensure light draft. We can also supply a lighter harrow—a combination of our No. 1 and No. 4—which has proven very popular.

COCKSHUTT

2-Furrow Light Tractor Plow

The farmer knows there are several good tractors but he is very particular about his plow—tor that must do the actual work of plowing his land. This plow may be easily turned into a 3-furrow when desired. Easily operated levers conveniently placed for varying depth of cut. This is a plow of proven performance.



Write to-day for our latest dealer proposition and new 1919 printed matter

Cockshutt Plow Co.
Limited
BRANTFORD, ONT.

Sold in Eastern Ontario, Quebec and Maritime Provinces by

The Frost & Wood Co.
Limited
Montreal, SMITH'S FALLS, St. John

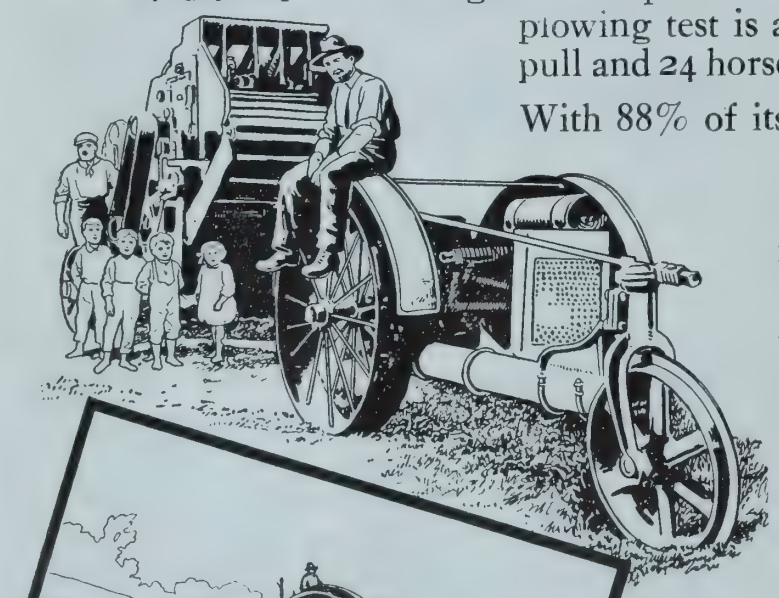
How the *Renfrew* Big Fou

Some machines have one or two good points that appeal to the farmer, but the Renfrew line has a wealth of them. It is far and away easier to sell the Renfrew line because every salesman who knows his Renfrew machine is armed with reserves of selling

Happy Farmer Tractor

The up-to-date farmer has his eye wide open for tip-top tractor performance at lowest cost per power unit. He wants a light machine that will do the things that big machines do—and that is exactly what the Happy Farmer does for him.

With only 3,700 pounds weight it will pull three fourteen-inch bottoms at average depth of 8 inches. This plowing test is a sales-closer. The tractor develops 2,000 pounds drawbar pull and 24 horse-power for belt work.

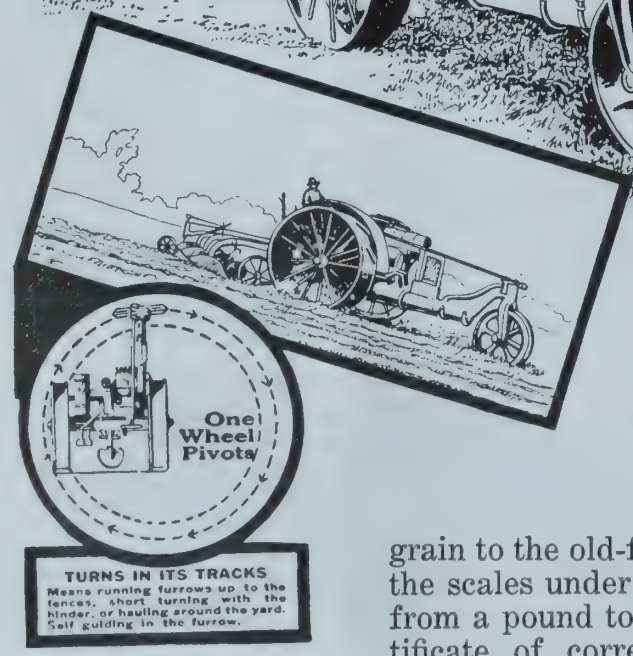


With 88% of its weight on the big driving wheels it grips the ground and loses minimum power propelling its own weight.

It has a perfected kerosene burning engine which gets the maximum power from cheap coal-oil.

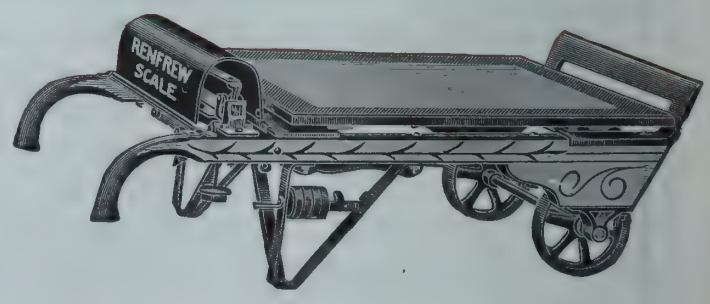
With the Happy Farmer, the operator can see all of the work. One man or a boy can run it. It goes anywhere horses can go, plows close to the fence, turns sharp corners, turns in its own tracks.

With its light weight, effective use of kerosene, and great draw bar pull it delivers power at lowest cost. The Happy Farmer Tractor literature gives a list of selling points showing why it is a ready seller.


One Wheel Pivots
TURNS IN ITS TRACKS
Means running furrows up to the fences, short turning with the binder, or hauling around the yard. Self guiding in the furrow.

Farmers' 2000 lb. Truck Scale

One look at the picture suggests half a hundred uses for so handy a scale on the farm. Instead of dragging heavy bags of grain to the old-fashioned scales, just slip the scales under them. Weighs anything from a pound to a ton. Government certificate of correct weight accompanies every scale. Write us for full particulars.



If your territory has not already been snapped up by enterprising deal

The Renfrew Machinery Company,

AGENCIES ALMOST EVERYWHERE IN CANADA

Solve the Selling Problem

advantages that are bound to win out--and are doing it every day! Have a look at a few of these compelling reasons why farmers want Renfrew lines and judge for yourself if you wont be decidedly fortunate to have the agency for selling the famous Big Four line.

Renfrew Cream Separator

Even the slightest gain or loss in skimming makes a big difference in the farmer's profits. That is why Renfrew close-skimming records make selling easy. The Renfrew skims down to .01 per cent. or 1-10 pound in 1,000 pounds of milk skimmed.

It is the only separator having the perfected curved wing centre-piece that distributes milk to discs without whipping. This means solid, better-priced butter.

It is the only separator with successful interchangeable capacity features. Show the buyer he can increase his skimming capacity by simply exchanging for a larger bowl and fittings, thus saving expense of entire new separator.

All working parts are enclosed in oil-tight, dust-proof housing. The Renfrew is self-oiling, requiring re-oiling only four times a year. It has low supply tank and high crank. It has easy-to-run and easy-to-clean advantages.

The Renfrew close-skimming records are proven by Government Dairy School's tests. These are fully shown in our illustrated catalogue, which also describes many other special Renfrew features. If you want an eye-opener on cream separator efficiency—read this book.

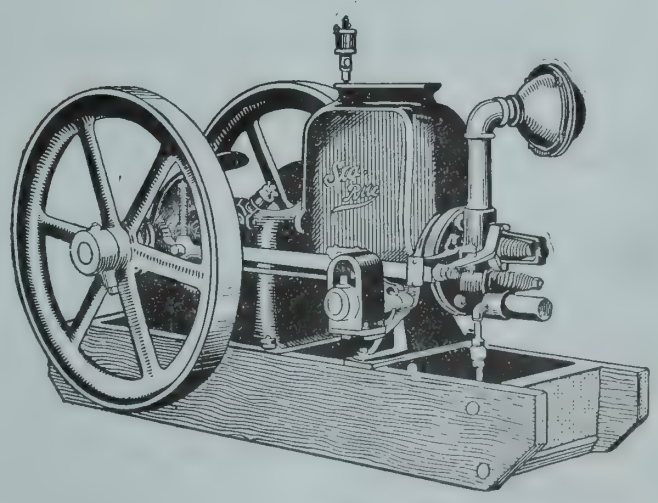
Renfrew Kerosene Engine

Here is one of the easiest of all engines to demonstrate because it is simply constructed. And this simplicity appeals to every sensible farmer. He knows the Renfrew will do his work without giving him trouble.

The Renfrew is built for 100 per cent. kerosene efficiency — and gets it. It is designed on true kerosene principles, which are entirely different from those for gasoline engines.

No adapted engine gets the vaporized kerosene into the combustion chamber warm enough. The Renfrew, with short intake manifold, gets it in **hot,** thus getting maximum power from the fuel. Every part of the engine has this same efficiency. The Renfrew was designed **Right.**

The Renfrew is available in sizes from 3 to 14 h.p., on skids, or mounted on wheels.



Renfrew Kerosene Engines appeal to the farmer who readily sees the advantage of low power cost, combined with simplicity and effectiveness. That is why Renfrews are favorites. The Renfrew literature will bring home to you what a great opportunity you have in this true kerosene engine.

o time. Write now for literature and attractive selling proposition.

nited Head Office and Works **Renfrew, Ontario**

EASTERN BRANCH: SUSSEX, N. B.

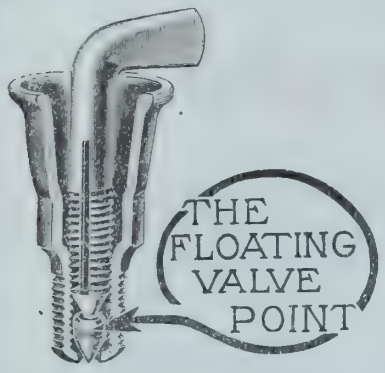
NEW EQUIPMENT SECTION

OIL CUPS

The Bowen Products Corporation, Auburn, N.Y., manufacturers of Empress grease and oil cups, have brought out a hinge lid pipe oiler, in both the elbow and straight style. These cups are light and strong, being drawn from sheet metal, and designed to stand severe usage. They are meant to fill the need for a low-priced dependable cup.

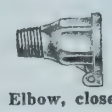
The rugged hinge and spring construction preclude all possibility of breakage at that point, which is usually the weakest point. The cups are self-closing and dust proof, are made in several sizes, and furnished in natural steel and nickel-plated steel finish.

In cases where a larger capacity cup of the straight hinge lid type is required a cup of practically the same type, but of considerably larger capacity, is designed. This cup is suitable for packing with waste if desired.



The distinct advantage of the floating brass valve point over the ordinary method of construction is unquestionable. It adjusts itself to all conditions and insures a positive seat, remaining absolutely tight when closed and is not affected by vibration. The vent placed on the opposite side of the rod from the handle does away with all possibility of burning the hand. The cups are simple

Elbow, open


Elbow, closed

in construction and easily cleaned. The solid steel rod and handle will not bend or break under hard usage. The cup can also be used effectively for relief purposes; two turns open the valve. They are supplied in three sizes, in

Straight, open

Straight, closed

either sherardized steel or polished steel finish.

There is also made by this concern a large capacity oiler of the D or Flit cover type. This type is at present made in three sizes Numbers 8, 9 and 12. The cup opens smoothly and closes positively. Accurate seating of the cap makes it dust proof. This is one of the cups approved for use by the Government on their Class B truck.

* * *

TIRE RIM IDEAS

A quickly detachable tire rim, manufactured by the Standard Parts Company, Cleveland, Ohio, has several interesting features. An effiicient-looking locking device has only to be opened to permit of the removal of a wedge which immediately releases the rim flange, thereby permitting a ready removal of the tire. The valve stem is placed safely away from the split of the rim, thus preventing injury to the stem as the rim is manipulated. The Stanweld rims conform to recently adopted rim standard.

MECHANICAL SLEUTH

An "auto-theft" device is being placed on the market by a firm of Los Angeles, Cal., manufacturers, and is one of the cleverest and most efficient yet patented. The manufacturers guarantee to pay $100 reward for the arrest and conviction as a thief of any person operating an automobile equipped with one of their "signals." This signal itself is a steel clamp that fits over the wheel and is secured by a Yale lock. At one end is a sharp spike. If any one attempts to run a car thus equipped the big pointed hump makes a terrific jolt every time the wheel goes around. The sharp point on the lock will make a hole in the road with every revolution of the wheel —a distinct trail by which the thief may be followed and captured.

* * *

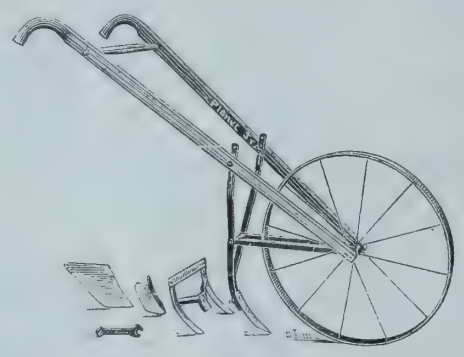
MOTOR CULTIVATOR

The Emerson-Brantingham Company, Rockford, Ill., have designed a motor cultivator to follow the tractor plow for preparing the seed bed, discing and harrowing, and then planting and cultivating the crop. This is the E-B No. 101 Motor Cultivator. It is a lightweight 3 or 4 horsepower machine, operating with a 4-cylinder motor. It is claimed that one man can plant from 20 to 35 acres a day with it.

* * *

HIGH WHEEL PLOW

Another member of the "Planet Jr."—No. 119—a garden plow and cultivator—is announced by S. L. Allen & Company, agricultural implement manufacturers, Philadelphia. This tool appeals to all those who prefer a high wheel tool for their garden work. Where the soil has not been so thoroughly and carefully prepared, the high wheel makes an easy running tool. The wheel is 24″ diam.



with a rim 1½″ wide, thus it should insure easy running in the lightest soil.

The plow with this high wheel has been on the market for a number of years, and may be used for plowing the ground in the spring, going twice in each furrow. Later it will open furrows for fertilizer or for planting; it covers them and plows to or from the crop during the season. The wide cultivator tooth may also be used for opening furrows, or for cultivating and hilling between the rows of plants.

* * *

NEW HAY-LOADER

A new harvesting machine (or hay-loader) will shortly be placed on the market by G.W. Sheppard, a farmer and machinist, who is working on his new model in a Toronto machine shop, and has been trying out his machine practically during the past few months on his farm at Concord, about 15 miles north of Toronto. This is a one-process harvesting machine, and will cut two six-foot swaths. It has eight mechanical feeds. Mr. Sheppard has been handling farm power machinery for nearly ten years, ever since he bought an old Mogul Tractor in 1910. He is a great booster for the tractor business. This new machine will be on the market about May of this year, and will cost the farmer about $100, says the inventor.

DRIVE YOUR TRACTOR

By a new device, model "G" tractor, manufactured by the La Crosse Tractor Company of La Crosse, Wis., may be driven by a farmer just as he would drive a well-broken team of horses, and with no more difficulty. The farmer would need no assistance in thus operating his tractor in the field. Two pairs of leather lines do the work. One pair connects with the ends of the steering apparatus over the front wheels, and the other operates the clutch, to start and stop the tractor.

* * *

U.S. TRACTOR, A.

The U.S. Tractor and Machinery Company, Chicago, Illinois, have announced a four-wheeled 20-30 horsepower machine designed to meet a variety of farm requirements. The motor in this tractor is a four-cylinder, and is especially designed to use kerosene as fuel and all working parts are enclosed. The crankshaft is 2½ inches in diameter with a total bearing length of 12 inches. The governor is of the fly-ball type and has ball bearing throughout. The cooling fan is 20 inches in diameter, and cooling water is circulated by a centrifugal pump.

A selective gear transmission with cut steel gears and Timken roller bearings, all in oil, gives two speeds forward and one reverse. A special feature of this tractor is separate foot brakes on each wheel. These may be used to assist in making short turns and can be locked to hold the tractor on a hill or in a belt. A floating drawbar is used to give a very flexible connection between the engine and the implement drawn. The tractor is known as the Uncle Sam Model A.

* * *

OIL-KIPPS

"Oil-Kipps," a force feed lubricator, manufactured by the Madison Kipp Lubricator Company, of Madison, Wisconsin, has several effective points of interest to all users of automotive machinery.

These cups are very simple in operation, requiring only, in the case of the

Reservoir

Single shot

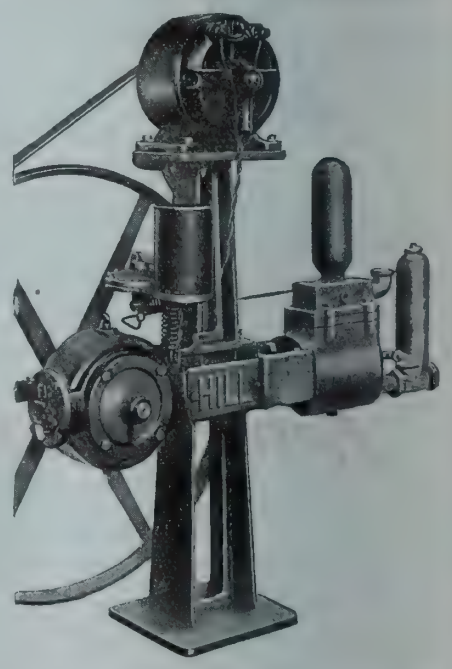
reservoir cup, the raising of the plunger and releasing it after the reservoir has been filled with heavy oil. The single shot type is also easily operated by drawing the plunger back, filling with oil with a common oil can, and releasing the plunger. This will force oil between any bearing surface, no matter how tightly housed, and is ideal for chassis lubrication.

* * *

AUTOMATIC PUMP

An automatic electric house pump for pneumatic service is now on the market. The pump is compactly arranged so that it occupies little floor space and can be mounted on a sub base adjacent to the tank or at a distance as desired.

The pump is of the horizontal double-acting type. The cylinder is brass, fitted with ample water passages, valve area and air chamber. Crank and cross-



heads work in an oil bath in an oil-tight case. A Westinghouse motor is mounted on the top of the pedestal, v

The motor is connected directly to the electric light circuit in the house. The pump forces water into the pneumatic tank, compressing air therein, as required. The expansion of the air drives water through the house pipes to the kitchen, laundry, bath, etc., in a steady continuous stream. When the pressure in the tank reaches the desired maximum, the motor and pump automatically stop until the water is drawn off enough to reduce the pressure to a predetermined setting of the switch. To prevent the tank from becoming water logged, an air valve is provided, which, when opened, allows air to be forced into the tank with the water.

* * *

8-IN-1 TRUCK BODY

The 8-in-1 American convertible motor-truck body, manufactured by the American Wagon Company, Dixon, Illinois, is a body which can be converted into eight different forms to make possible the handling of almost any kind of farm, or general, hauling without having to remove the body. This makes a straight-side grain box, a flared grain tank, a flat-rack with or without end board, a box rack, flared rack, or basket rack.

See also page 22

The Best Barn Equipment

You want to handle the best Barn Equipment made. You want your customers to be satisfied.

We were the pioneers in the Stall business and have long known the essential features of a well-built, sanitary cow stable.

There is one right way to finish Cow Stalls and many wrong ways. There is a certain weight and quality of material which should be used, while lighter weights will not do at all. Not all stalls are so durable that they will stand fire. Not all stalls are easy to instal.

BT Stalls are galvanized. Every piece of tubing, every bolt, nut and clamp is first electro-galvanized and then dipped in grey enamel. We have found that this is the only finish that will stand up to the hard conditions of the cow stable. We have found this in years of experience, and it is an exclusive feature of BT Stalls. Other manufacturers cannot supply the different patented features of BT Equipment. These features make sales easy, and give you satisfied customers.

BT Equipment Comes First

Whether it is for the barn of a big Dairy Company, for the Government Experimental Barns, or for the thousands of farmers who need sanitary Steel Stalls—BT Equipment comes first.

The swinging stanchion which keeps the cow comfortable and yet securely tied; the aligning device which keeps her lined up to the gutter, and prevents droppings falling on the cattle stand; the high level curb; the lifting manger; the one-bolt clamp; the double curve partition; the superior weight of material in BT Stalls; the durable finish —all these things put BT Equipment **first.** It is the standard equipment. The BT Dealer knows he has the best line on the market and that the goods themselves will back up the statements he makes about them.

It's the Best Line to Sell

BT Equipment is advertised in practically every farm paper in the Dominion. BT Dealers are helped by catalogues, salesmen, circulars and our Barn Planning Department in every possible way.

BT Equipment is no new, untried thing. It is a standard article more in demand this year than ever before. During the war farmers were forced to restrict their barn building and remodelling owing to lack of labor and material. This is going to be a "building year." This is going to be a big and profitable year for the dealer in BT Galvanized Stable Equipment.

We still have openings for good live agents in some districts

Beatty Bros., Limited,

Fergus, Ont. London, Ont. Winnipeg, Man. Edmonton, Alta. Montreal, Que. St. John, N. B.

The Man Who Guides The Lightning

PROF. W. H. DAY, B.A.
He has made a thoroughly scientific study of lightning rods. Now he's selling them—as secretary and manager of Shinn Mfg. Co.

PROF. W. H. Day, B.A., the well-known authority on lightning rods and lightning prevention, and organizer of the farm power courses recently given in Ontario, has left the O.A.C., Guelph, after sixteen years' service, to join the Shinn Manufacturing Company of Canada, of which he is now secretary and manager, with offices at Guelph.

After graduation from the University of Toronto with Gold Medal in Physics, 1903, he went direct to the Ontario Agricultural College, taking the position of Demonstrator in Physics. January, 1904, he was promoted to the position of Lecturer, and in May, 1906, promoted to the Professorship of Physics.

He had charge of the Province of Ontario campaign for wider use of underdrainage of farm lands. In this campaign about ten or twelve men were employed each summer making drainage surveys for farmers and drafting the plans of the same, and altogether about 150,000 acres have been laid out for underdrains in this way, and the indirect influence has been very much greater, as, owing to the quickened interest in drainage, much additional work was done that did not come under the direct supervision of the college.

In the spring of 1909 he was instrumental in bringing into Ontario the traction ditcher, which originated the extensive use of ditchers now in vogue. Up to that time only one or two ditchers had been brought into Ontario and they were lying practically discarded and the value of the machine unknown. Now there are perhaps 150 or 200 machines in the Province.

In December, 1909, Prof. Day published bulletins on "Farm Underdrainage, Does It Pay?" and "Farm Drainage Operations," which are still being distributed through the Province, showing the value and methods of underdrainage.

From 1904 onward, he made a close study of lightning rods with a view to determining their actual efficiency in use. In March, 1914, he published a bulletin on "Lightning Rods, Their Efficiency, Principles and Installation on Farm Buildings." The efficiency figures given in this bulletin constitute the first published data either in Europe or America showing the actual efficiency of lightning rods, and they prove that lightning rods, properly installed, are from 95 per cent. to 100 per cent. efficient, or, in other words, prevent from 95 per cent. to 100 per cent. of the damage that would be sustained by those buildings if not properly rodded.

In 1917 Prof. Day originated and organized the first Farm Power Course ever held at the Ontario Agricultural College, with an attendance of 155 students. This year the attendance at the same course rose to 220.

During the summer of 1918 he had charge of the preparation of a bulletin issued in October on "Farm Water Supply," the larger portion of which was written by him.

March 1, Prof. Day left the Ontario Agricultural College and assumed his new duties with the Shinn Manufacturing Co.

TRACTOR EXHIBITION SHOWS IMPROVEMENT

Continued from page 4.

big, 4-cylinder tractor of the three-wheel type, an 18-30.

Flexible pad traction wheel are outstanding features of the R. & P. Tractor —a machine in which refinement of detail was very noticeable, combined with trim appearance.

Our first contact with starting systems came to light on the Lauson machine, in the form of a very ingenious and apparently trouble-proof air starter —the Christmas. The Lauson is a heavy duty, 4-cylinder, 4-wheel machine, with a splendid reputation for service.

Photographs interestingly displayed, showing a Dart Blue Jay Tractor, pulling three plows in heavy work, under varying conditions, led one to return with renewed interest to the machine itself, which, while small and most compact, is obviously a power unit of unusual capacity. The Dart 28-40 transmits the power of its 4-cylinder engine through worm drive; has all parts fully inclosed.

There loomed up next a complete track-laying unit which led on to a Bullock, 4-cylinder, heavy duty, crawler type tractor.

With electric lights and rear spot lights, illuminating the parts of their own machine and showing details of the installation of the electric starting, lighting and speed governing systems, came next a powerful array of Moline Universal, two-wheel tractors in their characteristic coats of red. A demonstrator climbed up onto the seat in the rear of a machine and delivered continuous lectures and answered particular questions as they were showered at him.

Two Leader Tractors—one a 12-18, with 2-cylinder, horizontal opposed power plant, mounted on a 4-wheel chassis, and the other, an 18-36, powered with a large splendidly proportioned, 4-cylinder engine, were shown operated by electric motors. The larger model possesses an interchangeable drive feature, whereby crawler drive may be substituted for the round wheels.

Truck Maker's Tractor

HOW the Nilson Tractor grips the earth was clearly shown by illustrating the patented overhead-pull draw bar, by means of which the load is borne over and forward of the rear driving members, so that as the load on the draw bar is increased, the drive wheels get additional bite into the soil. This machine, powered with a 4-cylinder motor, has two more or less conventional type steering wheels in the front, but the rear drive wheels are radically different from anything that we have seen up to this time. There are three drive wheels—one on each side, and a broader one in the center.

Produced by the makers of the well-known Bethlehem trucks, the new Bethlehem Tractor made its bow at this show and was readily accepted as representing a very high type of machine. This is a 4-cylinder, 4-wheel tractor, with all working parts inclosed, delivering its power to the rear wheel by means of spiders which transmit the power to the rim of the wheels through the cushioning of coil springs acting on two cross members riveted to the rims on each end.

Camouflaged on the tractors — a never-ending source of interest, brought to mind the important part Holt Caterpillars had played in the late war. Holts in a wide variety, designed for agricultural work, were shown, running from a 25-40 to a big 120 H.P. mammoth machine. Among the military types shown was the now famous Whippet type of tank, fully armoured.

Fulfilling in many respects the strongest selling points of the track-laying type of tractor, and still retaining all the points of advantage possessed by the round wheel type, the new Heinze Tractor was truly a sensation. This machine incorporates the striking and easily recognized advantages of the 4-wheel drive type, but eliminates many of the complications heretofore accepted as necessary evils attending this principle. Steering is accomplished without varying the position of any of the four wheels. The method now so generally in use in crawler types is employed, whereby the variation of direction is accomplished by applying a hand brake operating on the differential. All four wheels are constantly in line, with continuous power applied, and a method of suspension has been evolved, providing great flexibility and considerable attention has been given to providing for the comfort and convenience of the operator.

The compact, splendidly proportioned Cleveland Tractor was well placed amid attractive surroundings. Much care and thought had obviously been given to arranging an exhibit that would teach the lesson of the advantage of power farming.

One complete Cleveland track-laying tractor was mounted on a platform, while a cut-away chassis operated by electric motor showed the working details. A long, narrow box, with glass sides, was arranged at one end of the Cleveland exhibit and was a striking but silent tribute to the value of thorough pulverization. One end of the box showed through the glass panel that the sod had been perfectly pulverized and the grass growing on the surface was seen to be strong and healthy. Along toward the other end of the box, the glass panel revealed the strata of unbroken clods and showed how this retarded the rising of moisture to the roots, and the weak, under-nourished grass on the surface showed the inevitable result.

ADJOINING the Cleveland exhibit was shown the Wallis Tractor Guide, which is a totally new type of guide developed to steer machines of the Cleveland type. This guide runs in the last plowed furrow and precedes the tractor, keeping it always at a given distance from the plowed land.

The Royer 12-25, a 4-wheel tractor, with a simple, clean-cut design, with a 4-cylinder motor, placed transversely, was shown in operation and attracted much favorable comment.

Two of the most interesting track laying tractors were shown in the form of the Monarch Neverslip—one of which is a 12-20 and the other an 18-30. These machines, powered with a heavy duty, 4-cylinder engine, show marked simplicity and evidence that the utmost care has been exercised to provide the user with the fullest possible degree of care-free service. These track-laying machines have a great many points of superiority—too many, in fact, to attempt to do justice to them here.

The new Champion Tractor, a 4-cylinder, 4-wheel machine, with 3-speed sliding gear transmission, worm drive and driving direct on plowing speed, arrived somewhat late in the week, but nevertheless the attention it received made up for lost time.

The initials F-W-D, standing for "Four Wheel Drive," were well worked out in the 15-26 machine by this name and which the name so graphically describes.

This machine, driven by a 4-cylinder, heavy duty engine, provides equal drive on each of the 4 wheels, while steering is accomplished by turning the wheels on a center pivot by means of chains actuated by the steering wheel.

So many new and strikingly valuable features had been incorporated in the new 4-wheel LaCrosse Tractor that it took quite some while for the visitor to get a thorough grasp on the situation. It is evident that when it was decided upon to add a 4-wheel model, the LaCrosse Tractor Company made up its mind to give the front undivided attention of its splendid engineering staff, and, as a consequence, the new machine possesses all the well-known rugged features of the 3-wheel model and has a front construction that is truly unique. The arrangement of the two front wheels, for example, is such that square turning is provided, and most flexible, 3 point suspension is attained, and the arrangement of the steering drag-links is such that the machine lends itself admirably to control by lines. This new model has the same 2-cylinder, horizontal, kerosene burning motor, with valves in the head that has made the Happy Farmer, 3-wheel machine famous. The well-known 3-wheel model was of course also on display, along with its new brother.

Five E-B, four-cylinder, four-wheeled machines made up a powerful display of the famous Emerson-Brantingham line, providing a full range of selection, from a small tractor to a great, big model, suited for largest farms. A cut-away working model showed details of power plant and transmission.

Had a prize been awarded to the most novel and striking exhibit, it would unquestionably have been won by the Bates Steel Mule. Real soil and plenty of it had been provided on a raised platform of ample proportions. In the immediate foreground was a splendid example of plowed land, while toward the rear of the platform there stood a Bates Steel Mule, pulling a 3-bottomed plow, turning a nice, clean furrow.

The Wallis line of Cub and Cub Junior tractors showed their splendid design to advantage, and a cut-away working model gave access to the details of its simple, thoroughly enclosed transmission.

An electrically-operated Heider tractor was kept running back and forth on the floor, enabling the interested visitor to climb into the operator's seat and drive the machine and get a keen appreciation of the friction transmission.

Two types of motor cultivators—one a single row and the other a 2-row, were exhibited by the Bailor Plow Mfg. Co., the former or smaller machine powered with a 2-cylinder, 8 H.P. motor, while the larger one has a 4-cylinder sweet-running, LeRoi motor.

A Bonanza for the Live Dealer

HERE IT IS!

The Latest and Greatest Tractor Success

THE NEW LIGHT WEIGHT "DIXIE-ACE"

11-20 H.P., with Big Surplus
Four Cylinder, 3¾" x 5¼", Heavy Duty Motor.
All Gears Enclosed, Running in Oil.
Spring Mounted, Timkin Roller Bearings throughout.
5 ft. 6 in. Wheelbase—Get in all the Corners.
Clogless, Sure-Grip, Patented Wheels.
Comfortable, Cushion Seat.

FOUR SPEEDS

2½ M.P.H. Plowing Speed
4 to 5 M.P.H. Road Speed
1½ M.P.H. Low Speed
1 M.P.H. Reverse

PATENTS APPLIED FOR

The new "DIXIE-ACE" is perfectly adapted for all field, road and belt work. No farm is too small—no farm too large. Every farmer is a prospect.
Its sensible, sturdy, compact and graceful design — its greater range of usefulness — its outstanding quality—its beautiful finish—and its convenience and all-round serviceability make this tractor the biggest seller and the best value on the market. It has more solid, service, selling features than any other tractor. The consumer falls in love with it at first sight.
We have a few choice territories not yet covered. If you can handle big business and want to be the leading power merchant in your territory, *write us at once*. You can see the immense possibilities of the proposition— agencies are commanding a premium — *DO NOT DELAY!*

OTHER MONEY MAKING GILSON PRODUCTS

"Goes Like Sixty" Gasoline and Oil Engines from 1¾ to 16 H.P.
The Wonderful Gilson Silo Filler—"The Lightest Running Blower Cutter Made."
The Hylo Silo—One of the Biggest Money-Makers You Can Handle.
The Light Running Gilson Thresher—For the Individual or Syndicate.
Gilson Feed Grinders—Wood Saws—Pump Jacks—Pulleys—Belting, etc.

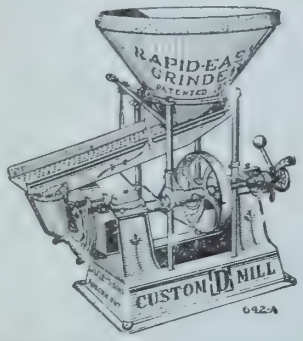
GILSON MFG. CO., LTD.

Dept. D.A. Guelph, Ont. Canada
Dept. D. Winnipeg, Man. Canada

GRINDERS FOR TRACTOR POWER

"RAPID-EASY" GRINDERS

have set and are constantly maintaining a distinctively high-quality mark.



The Best for Your Trade

STYLE D CUSTOM MILLS

are particularly well adapted for Tractor Power. Four Sizes:

MOST WORK, LEAST POWER, BEST QUALITY

$9\frac{3}{4}$ in. $10\frac{1}{2}$ in. 11 in. 13 in.

Compared with other Grinders and tested for Operating Efficiency---- number of days of active service,

The "RAPID-EASY" is AN EASY WINNER

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J. FLEURY'S SONS

Aurora, Ont., Canada

HARNESS COLLARS AND SADDLERY

IMPERIAL BRAND

New Illustrated Catalogue

Now Ready to be Distributed

We have just issued one of the most complete catalogues, and merchants who handle harness will find it a great help.

"Imperial Brand Harness"

is well known for quality.

THE TREES, SPRIGGS CO., Limited

WINNIPEG MANITOBA

This is a fine-looking herd of tractors. The above picture shows 53 "Happy Farmer" Tractors unloaded at Renfrew, Ontario, for the Renfrew Machinery Co. In looking at those machines standing out in the freight yards, a feature that nearly all tractor manufacturers have emphasized in their advertising matter is emphasized, namely, that when not in actual use the tractor is so much cheaper to keep than a horse. There is the equivalent of 744 horses in that yard and no one feeding or grooming them, whereas, had they been flesh and blood a large quantity of hay and oats would have been required daily and quite a staff of men to look after them. This was one of the factors which influenced the Ontario Department of Agriculture two years ago to decide that a light farm tractor was a real necessity on the Ontario farms, if greater production was to be secured quickly for national safety.

NEW EQUIPMENT SECTION

See also page 18

CLEANS THE GRAIN

A suction grain-cleaning and conveying apparatus that has attracted the interests of growers has recently been demonstrated among the important farm implements that have developed lately. It is mounted on a four-wheeled carriage so as to be mobile, and may be used equally well for loading, unloading, and elevating. Through friction considerable heat is generated, and this tends quite effectively to dry wet grain. A strong air current is developed by a rotary blower which draws the grain through a flexible intake pipe to a revolving sieve that separates the chaff, dirt, wild oats, mustard and pig weed seed from it. The impurities are discharged through a chute to a sack, while the grain, cleaned and dried, is elevated to storage bins, or loaded into a wagon or car.

Grain is purchased according to its grading, so that clean grain commands a better price than that which contains chaff and weeds, and for this reason this machine, which performs its several functions in one operation, enables the grower to market his grain advantageously. The machine is operated at modest cost, and is said to pay the large grower a generous profit.

* * *

PORT HURON TRACTOR

A well laid out, 4-wheel tractor, with 4-cylinder valve in the head motor was shown by the Port Huron Engine & Thresher Co. at the Kansas City Convention, Feb. 24 to March 10.

Many marked points of advanced engineering were displayed; power is transmitted through an entirely enclosed transmission direct to the rims of the rear or driving wheels.

Friction transmission is successfully employed by means of a 20-inch diameter wheel, with fibre face, 2½ inches wide, operating two 28-inch friction discs.

* * *

TURNER TRACTOR

A 4-wheel machine of splendid proportions was exhibited in the Turner 14-25, at the Kansas City Show.

That the Turner tractor is well-known for its great serviceability and sturdiness of design and for convenience of operation are self-evident. The final drive is accomplished by a large, internal sprocket driven by roller pinion. When in operation, these rollers turn with the motion of the driver and, like rollers in a chain, turn the sliding motion of the gear into rolling motion.

NEW "SPUD" PLANTER

A Potato Planter which requires the attention of but one man and can be mounted on any suitable plow is being manufactured. It is comparatively inexpensive and plants two rows at once, the seed being contained in two trough-like hoppers, from which it flows into two conical revolving drums, placed horizontally. In order that they can drop seed in parallel rows these drums are situated with their larger, or discharge, ends at opposite sides of the planter.

A chain which is connected with the implement's gearing from a wheel running on the ground drives the drum. Scoops which are attached to the large end of each drum inside pick up the desired amount of seed and elevate it to discharge holes, through which it drops into the furrows. At the small end of each drum is a small hopper which is equipped with a simple discharge device operated by the drum axle. These hoppers can be used to place fertilizer in the furrow along with the seed.

* * *

TRACTOR'S WIDE DRUM

A "drum" tractor that has been developed for heavy-duty farm work has features of distinct interest apart from the mere novelty of design. It is admittedly distinctive in appearance, but of greater importance are some of its mechanical features. Among these are its driving systems and frame, the latter being essentially of one-piece construction and suspended beneath, instead of being supported above, the rear axle.

Power is transmitted through a simple gear set to a jackshaft, no differential being employed. It is equipped with a four-cylinder engine and works at a speed of from two to two-and-a-half miles an hour. One of the most distinctive features of this tractor is its broad drum, which is 54 in. wide and of equal diameter. The front wheels are 8 in. in width and set outside of the drum's path, so that, in advancing, the machine rolls a 70-in. strip of ground. There is direct transmission of power to the pulley, which drives a belt at a speed of 2,600 ft. a minute. The turning radius of the tractor is 10 ft. and its weight approximately 5,200 lbs. The entire machine is protected by a corrugated sheet metal cover that follows the contour of the drum at the rear.

No. 306 Hill or Drill Seeder, furrowing, planting, covering, rolling and marking next row in one operation.

Seed Savers

Your customers are interested in saving seed. Whenever practicable, they should *plant in hills*—not drills—and save the seed that would be wasted by planting in drills such crops as need to be thinned.

The hill-dropping feature of the Iron Age Combined Hill and Drill Seeders saves from a half to three-quarters of the seed that would be required by drilling, and saves the labor of pulling out the extra plants.

Gardeners who know "what's what" say that Iron Age Garden Tools are the "best **buy.**" And "the 'best **buy**' for the customer is the best **sale** for the dealer"—a rule you can well observe by offering your customers

IRON AGE
GARDEN TOOLS

Labor Savers

All of us like fresh vegetables from our own gardens, but none of us like the back-aches which result from the use of the old-fashioned tools. Show your customers how easy it is to plant, ridge, furrow and cultivate in a **farm-like** way with Iron Age Garden Tools. Show them how market gardeners (experts) use Iron Age Seeders and Wheel Hose. We'll send you illustrated booklets that will help.

There are many kinds and sizes of Iron Age Garden Tools for use in the small home gardens, poultry farms, seed farms and truck gardens. Send today for catalogs, prices and terms.

MADE IN CANADA

The Bateman-Wilkinson Co.
LIMITED

391 Symington Ave., Toronto, Canada

The Iron Age Line includes Potato Planters, Sprayers, Cultivators and Diggers; Corn Cultivators; Garden Seeders and Wheel Hoes; Truckers' Variety Machines; Harrows; Horse Hoes; Hay Rakes; Sulky Weeders; Field and Orchard Sprayers; Bucket and Barrel Sprayers; Fertilizer Distributers; Wilkinson Plows; Climax Ensilage Cutters, etc.

Same tool does the cultivating, furrowing, ridging, weeding, hoeing, pulverizing, etc.

Tractors Under $1,400 Still Free

Interesting Comments From Montreal Star and Edmonton Journal Editorials

THE 27½ per cent. duty on farm tractors valued at less than $1,400 will continue to be remitted until further notice, according to an order-in-Council issued in February. The order passed last year expired February 7, 1919, so action had to be taken before Parliament assembled. A statement made in a motor trade journal that the remission now made is for *one year from February*, 1919, is not correct.

The new order does not fix a date for expiration, but it is expected there will be an official announcement on the subject by Sir Thomas White when he introduces his budget this month.

The remission was made in the first place to enable farmers with a depleted labor supply to join effectively in the "Greater Production" campaign. Whereas in 1916-17 only 2,000 farm tractors of all kinds were brought in under the duty, in the first nine months since the duty was remitted 9,000 of the cheap tractors alone were brought in. This speeded up farm work greatly wherever tried, and it was felt by the Cabinet that there was still need of encouraging production and that it would be unwise to restore the duty at the present time.

An additional order has also been passed granting a drawback of 99 per cent. of the duty paid on imported materials used after February 7, 1919, in the manufacture of gas or gasoline traction engines for farm purposes, and repairs therefor, and in the manufacture of traction attachments and repairs therefor, designed to be combined with automobiles in Canada for use as traction engines imported for farm purposes.

It is understood that the number of these engines imported for farm purposes has been several thousand per annum, while the quantity manufactured in Canada each year has been less than five per cent. of importations.

* * *

"VALUED" vs. "COSTING"

IT is interesting to note in the order-in-Council passed January 30, 1919, that tractors are admitted to this country "*valued* at not more than $1,400 each and repairs therefor," while in the 1918 order-in-Council the word "*costing*" was used instead of "*valued*."

This lead to an extraordinary interpretation of the order-in-Council. Just what occurred is told in a despatch published in the Toronto *Star*, from Ottawa.

The charge made by a Winnipeg daily to the effect that under the order-in-Council of February 7, 1918, rebating the duty on tractors costing $1,400 and under, the Rumley people brought in tractors valued at $2,400 and the International Co. tractors valued at $1,900 is not denied here. It is admitted that the order permitted a considerable latitude owing to the indefiniteness of the application of the word "costing." The American manufacturers, for instance, were in a position to claim that it meant cost of production and not cost to the purchaser. Under the new order-in-Council extending the rebate the interpretation is made clear and applies to the selling price of the implements.

In the meantime, however, it is alleged that nearly a quarter of a million dollars of duty has been rebated to the firms above mentioned upon the dubious interpretation of the word "costing."

Did this benefit the farmer? The Winnipeg *Telegram*, which is the "daily" referred to above, says:

One of the most highly interesting features of the tractor scandal, in which certain tractor manufacturers who were permitted by the Government to bring in high-priced farm tractors duty free, is the question of whether or not the action taken has benefited the farmers.

The answer is that it has not. Tractor firms who paid duty on the machines they imported, sell at a margin of approximately $1,000 over cost. This amount covers from $400 to $500 duty, local office expenses, salaries and commissions, dealer's profit and local overhead charges.

Tractor firms who did not pay duty on the tractors they imported under special privilege from the Government, also sell those tractors at a margin of approximately $1,000 over cost—so that the same margin is charged to the farmer by the man who does not pay duty as is charged by the man who does pay duty.

The only difference is that in the one case all of the money goes to the tractor company and in the other part of it goes to the Federal Government.

* * *

FREE TRACTORS GOOD BUSINESS

UNDER the heading "A New National Policy," the Montreal *Star* editorially refers to the fact that small farm tractors are to be continued on the free list. The Montreal *Star* handles the question merely as a business proposition, and says:

"Farm tractors are to be continued on the free list. Good business! They are an essential factor in the efficient production of Canada's greatest asset. They are not made in Canada in quantity amounting to more than one-twentieth of the demand, and the revenues to be secured from their import taxation would be a flea-bite compared with the wealth in wheat their work will produce.

The question involved is not free-trade versus protection but simply *business common sense.*

But if, ten years ago, when the tractor business was in its infancy and before the demand had been created, adventurous Canadian promoters had invested large sums of money in tractor factories in Canada, with the understanding that their business would be protected by a national tariff until it could stand unaided against international competition, the situation would be a bit different. Then the investor, if he still believed or professed to believe that a tariff removal meant ruin, would be in a position at least to demand, as a matter of justice, that his props should not be removed until the stability of his foundation, unbuttressed, could be examined."

* * *

AN ENTERING WEDGE

THE Edmonton *Journal* believes the free entry of tractors is an entering wedge, and that the whole question of tariff revision must be faced within a year:

A prospective manufacturer of farm tractors, said the Hon. Charles Stewart, Premier of Alberta, in a speech in the legislature, had been deterred from establishing an industry in Alberta because the Dominion Government had extended the free entry of tractors from the United States, and without tariff protection the manufacture of machines in this province would not be feasible.

The continued free entry of tractors is a concession to the demands of the free-traders of the West. Had the tariff been restored to its pre-war basis in this particular respect there would very likely have been loud protests from many sources, and the action of the federal authorities has been an effort to meet a situation that admittedly concerned the farming interests of the West somewhat seriously. But there is another angle to the case, and the Alberta premier has been one of the first to see it. Will he and his followers see it through?

There is evidence that no Government plans for tariff revision will be brought forward at the approaching session of the Dominion Parliament.

Autos and Trucks

A RECORD-BREAKING SEASON

LATE in the summer of 1918 it was generally conceded that 1919 would be a blank year in the motor car business. War needs had grown to such an extent that there was no material in sight for the manufacture of pleasure cars. Mars had clutched the visible steel supply with greedy fingers. Automobile agents were looking for temporary jobs until such time as there would again be automobiles to sell.

The armistice came unexpectedly, but it brought immediately relief to the motor industry. It was realized at once that, with peace in sight, the restrictions on the manufacture of pleasure cars would be removed, and almost overnight plans were readjusted for the 1919 campaign. To-day there is every indication that it is going to be a big year, perhaps a record-breaking one. People have lots of money, and they are going to buy cars; they are buying cars, in fact, in ever-increasing numbers.

There are still lots of implement and tractor dealers who do not carry an automobile agency as well, but the number is getting smaller all the time. In fact, this spring will see a great many dealers start out with a new string to their bow in the shape of an automobile agency. The writer walked into the office of a Western Ontario dealer a week or so ago and found the latter smilingly appending his signature to an agreement to handle a certain popular make of car.

"I've given in," he declared. "I was a die-hard before and didn't believe in mixing the good old implement business with anything else. If the farmers wanted to buy cars from the slick city fellows who went out after them, all well and good. That was their business. I reckoned that my business was to sell the farmer the practical equipment he needed to run his farm.

"But, say, I've changed my mind," he went on. "The farmer is the real prospect for automobiles to-day. He's done pretty well the last few years and he's suddenly wakened up to the fact that he and his family are entitled to a little pleasure in this world, as well as the city people. It won't be long before every farmer, more or less, will have a car. Why shouldn't I get some of the profit that's going to be made in selling cars to farmers? No reason at all. I have the best chance of any man in this county to sell cars to farmers, and I'm not going to let old-fashioned ideas prevent me from cashing in.

"In fact," he concluded, "I know where I can sell four cars right now. All I got to do is to go out and see 'em. I'm going out to-morrow."

A Matter of Cash

Motor cars make an attractive line for the implement dealer to handle for various reasons. They don't entail any expense in the matter of canvass—the dealer has to get out and cover his field anyway. And then there is the fact that automobiles are sold for cash—money down on the nail, no deferred payments, no system of notes, no bother about collections, but CASH. It follows that the man making the sale gets his commission promptly, and in full, and has no subsequent worries.

From all indications there is going to be a heavy sale of motor cars in Canada this year. All manufacturers anticipate that they can sell all that they can make, and perhaps a few more to carry over.

The sale of automobiles depends to a great extent, of course, on business conditions. If business is good, cars sell in plenty. The dealer, therefore, keeps his weather eye on the business barometer. There need be no serious misgivings on that score at the present moment. Despite the closing down of the munition plants, the winter months have been weathered without any serious amount of unemployment. With the opening of spring and the commencement of what will unquestionably be a big building season, the unemployment problem should be relieved. In fact, there is reason to believe that a satisfactory degree of industrial activity will be maintained throughout the year.

This will have its reflection on the automobile business. Sales will be brisk during 1919.

In this connection it is interesting to quote what "Motor" says with reference to the prospects:

"The conclusion may be stated first. The automobile business during 1919 is likely to equal, if not to surpass, the high records of 1917. It probably will be mid-spring before most of the factories will be in position to turn out cars in quantity. It may be mid-summer before capacity production is reached, but the production during the latter part of the calendar year is expected to make up for the time that is being lost now. If no untoward events of large and serious consequences occur, the production and sale of cars should reach the 2,000,000 car mark in 1920."

* * *

CHANGES COMING IN CARS

AUTOMOBILE dealers are, of course, very directly interested in changes and improvements in cars. It will be with great interest, therefore, that they will learn of changes that are coming as a result of war experience. The war period was no time for experimenting; it was no time to start development work. The war was won because we produced and produced in quantity what we already knew about and knew how to manufacture. During the time it was engaged in this performance the motor industry saw some previous errors; it saw places for improvement; it could see how this or that could be improved or cheapened or how production could be speeded up or manufacturing methods bettered. As a result, the motor industry got out of the war not so much a better knowledge of design as a better knowledge of manufacturing methods, better methods of making parts quicker and more accurately. It has learned how to produce good units in quantity. It also has learned to be extravagant of everything but time. So while our industry was making engines and trucks and passenger cars and tractors, trailers and what not, it was also busy observing, and the observations have taught it much. While there was not time to put into immediate use the knowledge thus gained, the next few months will see the engineering departments working at top speed to verify their observations, and the whole conglomerate mass of data obtained during the past years will be reflected in our next crop of cars.

Briefly those cars will be much lighter than our present ones; they will use more aluminum and pressed-steel parts, they will have better bodies, be more comfortable, far more economical, cheaper in price and show a general refinement in detail all through. Engines will be better lubricated. They will run hotter and more of them will use thermostatic control. Ignition will certainly be improved, bearing trouble will be a thing of the past in these engines, because of what has been learned about making bearings and oiling them.

Perfect Potato Planting

One Seed-Piece and *Only One* in Every Hill

Perfect Planting Pays the Profit! Cut out the "perfect" and you cut out the "profit." The first part of the crop goes to pay the cost of production; consequently, the profit depends on that *extra* part of the crop which perfect planting gives. Perfect planting, together with stabilized prices due to the new dehydration plants and potato flour and starch mills, will enable your customers to calculate their profits with certainty.

A complete and perfect crop is *this year* more important than ever. A hungry world to feed, and reports of small plantings in the South indicate that every grower is going to be anxious to get the *utmost* out of his crop.

Save Seed! The Iron Age Potato Planter is known as the 100 per cent. planter because it puts *one* seed-piece and *only one* in every hill. This means a saving of $10 to $20 per day in seed alone. Loss through puncturing and bruising is entirely avoided.

Save Time and Labor! The perfect planting of the Iron Age means a tremendous saving of labor, time, fertilizer and insecticides, which would be wasted on missing hills. Unplanted spaces in the rows have to be worked over with plow, harrow, planter, cultivator, weeder, sprayer and digger, and require fertilizer and insecticides, just the same as if planted. This loss *must* be avoided.

Uniform Spacing Makes Uniform Sizes! The "always-correct" spacing of the Iron Age Planter is necessary to obtain the largest percentage of No. 1's. Plants which are too close together produce undersize potatoes, while those too far apart produce oversize potatoes.

The IRON AGE Line includes Potato Planters, Sprayers, Cultivators and Diggers; Garden Seeders and Wheel Hoes; Truckers' Variety Machines; Horse Hoes; Hay Rakes; Sulky Weeders; Climax Ensilage Cutters; Wilkinson Plows; Drag and Wheel Scrapers; Wheelbarrows, etc.

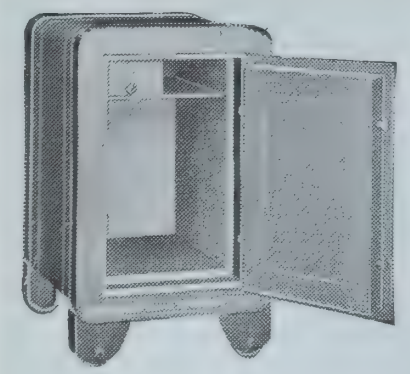
There is only one planter that gives this "personally-inspected" planting which saves seed, time, labor, fertilizer, insecticides, and the *profit-part* of the crop---the IRON AGE---

Made in Canada

The Bateman-Wilkinson Co. Ltd. 392 Symington Ave. Toronto, Can.

Since 1836, friendship for the IRON AGE Line has been growing among Canadian and American farmers. You can share this friendship by selling IRON AGE Implements. Send to-day for catalogs, prices and terms.

IRON AGE
Potato Machinery



A safe place for valuable papers, sales notes, bonds etc.

Just Meets the Farmer's Need

A real made-in-Canada household fire-resisting steel cabinet, fitted with combination lock etc.

Implement Dealers:

If you are in touch with the farmers in your district, here is your opportunity.

Write for prices and full particulars

J. & J. Taylor Limited
TORONTO SAFE WORKS
Toronto, Canada

Shaw's Auto Salvage Parts Supply Co.

923-927 Dufferin Street, Toronto
PHONE JUNCTION 3384

An efficient service intelligently rendered on all used parts.

GEARS, MAGNETOS, RADIATORS, SHAFTS, SPRINGS, CARBURETORS, BEARINGS, LAMPS, WHEELS

"ALL SERVICEABLE" NO JUNK

Correspondence Solicited. Inspection Invited.

Prompt Deliveries. Money Back Guarantee. No Advance in Our Prices. Largest Stock in the Dominion. No Sending of Wrong Parts is convincing enough for you to *Wire, Write or Phone.*

Shaw's Auto Salvage Parts Supply Co.
923-927 Dufferin Street, Toronto
PHONE JUNCTION 3384

K-13

To Farm Implement Dealers

For the business progress of 1919 our famous Peter Hamilton farm implements are a good line for every live agent. Our implements have stood the hardest of tests, and for many years we have been manufacturing farm implements that the farmers are satisfied with.

Farmers everywhere recognize Peter Hamilton Farm Implements as leaders in the farm field.

Dealers! Now is your chance to procure an agency that will build bigger and better business.

Peter Hamilton Farm Implements

The Peter Hamilton Cultivators have an unique construction that adapts them to varying conditions and the hardest kind of work. We manufacture spring tooth and stiff tooth cultivators, scufflers, harrows, mowing machines, rakes, plowers and cutters. Every one is of durable construction and built to meet the demand of the heaviest work.

Act now and get the agency for this paying line.

The
Peter Hamilton
Company
Limited
Peterboro, Ont.

NEWS — OF THE TRADE FOR THE TRADE

A short farm power course is being given March 5 to 13, in Nova Scotia, by the Department of Agriculture, at Truro.

* * *

The Garbutt Auto and Tractor Institute, of Calgary, Alberta, is giving night classes in automobile mechanics and vulcanizing.

* * *

Sign of the times· A Seaforth. Ontario. power machinery company, is advertising for "two energetic live salesmen to sell tractors."

* * *

The Cornwall Motor Sales Company, of Cornwall, Ont., has received a car load of light farm tractors from the Case Company.

* * *

The Allis-Chalmers concern is, according to report, planning to enter the agricultural machinery field, paying special attention to the foreign market.

* * *

The paint and trimmings shop of F. Lennox & Sons, Chatham, Ontario, was destroyed by fire February 24, twelve automobiles being included in the loss.

* * *

In Western Canada, where there are soft sands and mud, trucks on pneumatic tires are doing work that could not be done on trucks equipped with solid tires.

* * *

W. H. Wiggin, until recently manager of the Montreal office of the Canadian Fairbanks-Morse Co., left on February 28 for Australia, to locate new markets in the Antipodes.

* * *

The McKenna Garage, George Street, Sydney, N.S., was gutted by fire, February 19th, and about $30,000 worth of damage was caused, with little insurance on either building or contents.

* * *

A. R. Erskine, president of the Studebaker Corporation, states that the automobile industry will profit considerably by adapting the latest wrinkles used in the manufacture of aeroplane motors.

* * *

J. B. McLaren, a progressive farmer of Horton, Renfrew County, Ontario, has purchased from the Government one of the rented tractors, a "Happy Farmer," and has also bought a second from the Renfrew Machinery Co.

* * *

R. S. McLaughlin has been elected a director and member of the executive committee of the General Motors Corporation. Mr. McLaughlin is president of the McLaughlin Motor Car Company, Toronto.

* * *

The Province of Quebec has introduced a bill to authorize municipalities to levy a tax on motor vehicles used to carry passengers or freight for hire. This tax is to be in addition to that collected by the province under the general law.

* * *

J. L. Stewart of the MacLean Publishing Company, connected with the Advertising Staff of the CANADIAN MOTOR, TRACTOR AND IMPLEMENT TRADE JOURNAL, attended the recent National Tractor Show at Kansas City, February 24 to March 1.

* * *

J. B. Ross and A. C. Millar, formerly of Oshawa, have taken over the Chevrolet Motor Company Agency for Hamilton and vicinity. Their new garage, show rooms and service station are located in Charles Street, in the centre of Hamilton.

* * *

A movement is on foot in the City of St. Thomas, Ontario, to introduce motor buses to take the place of, or assist, the street railway. The new 'bus would be a double-decker. The question of its introduction must go to the people of the city for a final decision.

* * *

One of the first, if not the very first, of the new Service Flags seen in Toronto is that of the Ontario Motor Car Company. This concern has in the window of its Toronto showrooms a "former soldier flag," with this written on it: "We employ 15 former soldiers."

* * *

H. A. Biggert, for seven years superintendent of the Hamilton Works of the International Harvester Company, has resigned to accept a position as General Manager of Works for one of the largest industrial manufacturing corporations in the United States, at Bridgeport, Conn., says the Hamilton *Times*.

* * *

Representatives of the Irish Co-operative Agricultural Society, now in Ottawa, have concluded arrangements for the purchase of a large quantity of agricultural machinery, and placed an order with Frost & Wood Company, of Smith's Falls, Ontario. Other orders of considerable magnitude are expected to follow.

* * *

The entire capital stock of the Oliver Chilled Plow Works of Canada, located at Hamilton, Ontario, has been purchased by the International Harvester Company, of Canada. The present personnel of the plant will be retained and they will continue to build the same types of plows turned out heretofore. For a number of years the Canadian I. H. C. has sold the Oliver product.

* * *

Chairman Black, of the Soldiers' Settlement Board, deprecates soldier-settlers buying any more machinery than is indispensable, because he anticipates that the price is bound to come down—ultimately. The Toronto "Mail and Empire" points out that before it comes down very far the price of wheat will have to get back to about $1.25 or $1.50, and that too much delay to allow for falling prices will be a mistake.

* * *

How long can a driver of a motor car "get away with it" without buying a license for his vehicle? One of the queerest cases that ever cropped up in a Massachusetts court is that of John P. Frederickson, who, when arrested and brought into court for being mixed up in a slight accident, stated that he had driven for nine years without a license, and had never been asked to take out one.

* * *

The Department of Agriculture of the Province of Alberta has been conducting, during the last two weeks of February, short course schools for the benefit of the farmers, farmers' wives, sons and daughters, at the schools of agriculture at Claresholm, Olds, and Vermilion. Instruction was given in gas tractors, engines, automobiles, etc., as well as livestock, soil cultivation, seed selection, and a number of other allied and domestic subjects. At the College of Agriculture, Edmonton, March 3 to 8, a similar short course was given.

* * *

An attractive "Tractor Buyers' Guide" is off the press, issued by the Hession Tiller and Tractor Corporation, of Buffalo, N.Y. This is a guide book for farmers published by a farmer, George E. Pierce, a former Canadian, who acquired most of his knowledge of the grain growing business from experience in Canada before he went, some years ago, to New York State.

This guide announces the change in name of their four-wheeled farm and road tractor from Hession to Wheat tractor. *See also page* 28.

Dairy and Household Supplies

THE farm woman is taking a greater interest in her farm work than ever before. She is examining power machines for her work. She wants power attachments for that washing, churning and ironing, and most men can become interested in anything along this line too.

* * *

Keep your eye open for all innovations spoken of at the meetings of the Women's Institutes in your territory. A little change in your weekly ad in the local paper will do wonders by showing how you follow their needs.

* * *

One implement dealer, who heard that the women at their regular meeting were discussing toilet accessories for the farm home, put on a display in his shop and ran an attractive ad inviting the women to come and see them, and thereby made several sales.

* * *

CREAM SEPARATORS

The cream separator needs a great deal of attention to keep in good running order. Some think their machine is no good when it is merely out of balance. The wise agent will sometimes advise his patrons of the trouble and so win their thanks by saving them a new purchase or a trade. Such business always pays in the long run. It is never good business to make a sale where it is not needed.

* * *

MILKING MACHINES

Milking machines are used successfully by many farmers all over the country. Never knock the business. Power work is all right and will come right. In cases of trouble, it has been found that it was almost wholly due to the carelessness of the operator. One farmer says: "By cutting down the labor involved in the work of milking the cows and in handling and separating the milk, I have at last put my dairy on a paying basis. It formerly required three of us to milk the cows and this work is now accomplished by one man in the same length of time with the use of the milking machine. The saving on this operation amounts to 2,190 hours each year and represents nearly $450 saved." Here is a good talking point.

* * *

Many farmers use typewriters. They are easy to run and lend so much distinction to any farm correspondence that it ought to be easy selling to put a little sale talk to a progressive young man who comes into your shop. This is only another side-line where an occasional sale can be made to help out your annual turnover.

* * *

A good water supply, a complete sewage-disposal plant, and effective heating and lighting systems constitute the four prime utilities of the farm home, the foundations of safe, comfortable living.

* * *

COW-TESTING

Cow-testing is done by a great many farmers in Canada and doubtless there are many in your territory who will be interested in Babcock testers and other dairy supplies. Keep a weather look-out on your dairy men, and draw their attention to your ability to supply their every need. The wide-awake, salesman who does the unusual thing gets the business. Dairymen are money-makers and always have cash.

* * *

Do you know anything about cows? About silos? About sweet clover for silage or what other grasses go into silage well? Keep posted on these things and the dairy farmers will come to you for advice.

Along about this time of the year a great many of the farmers are closing their plans for the coming season and are purchasing a large percentage of farm machinery and dairy equipment. This is done so that there will be no delay at the time when the ground is in shape for the farmer to begin his spring work, or in other words, he wants everything ready so that his chores will take as little time as possible.

* * *

GO TO IT!

It doesn't do a bit of harm
To grin;
It never causes much alarm
To smile;
Men have been known to laugh while at their work,
Yet win—
With cheerfulness to do their tasks nor shirk
The while.
So, if you like your job, as you pursue it,
And feel like smiling—why, my boy,
Go to it!

—*Exchange*

* * *

TRY THE 'PHONE

If the country roads are bad, or you can't get out for some other reason, go to your ledger or telephone book; get the names of a number of farmers who you think might be in the market for a cream separator, step to your telephone and "just turn on the lights" and get what information you can. By so doing a great many good prospects can be secured. The average farmer is usually at home at some time of the day and is glad to have a little chat over the phone with the business man from town. Wars have been won by carefully studying maps and conditions and getting everything ready and then "turning on all lights" and separator sales can be made at this time of the year by following the example of the "chicken man."

* * *

Noah had just reached the dairy animals, during the loading of the ark.

"Shem," he remarked, "a word to the wise is sufficient, put the milk cows in last and not far from th' dinin' saloon. I want cream with my coffee mornings."

"All right, captain," answered Shem, as he continued with polishing the new separator.—*Hoard's Dairyman.*

* * *

When locating the well the direction of surface and underground drainage should be considered, to the end that the water supply may not be contaminated by the sink drain, cesspool, or other sources of filth. Pumps, piping and casings as well as cement are used extensively by farmers and there may be a point here.

* * *

SHIPMENTS TO BRITAIN

During the war Canadian shipments of farm implements to Great Britain were much larger than under normal conditions, since the British plants that ordinarily operated in this industry were obliged to devote all their capacity to the production of munitions. British manufacturers have announced that they intend to now make use of their plants to the greatest possible extent in making agricultural implements that formerly were imported from Canada and other countries. An Advisory Committee, appointed by the Minister of Reconstruction, is now working on the problem.

* * *

An unusual accident occurred at Simcoe, Ontario, recently. Two men from Port Dover were proceeding along the highway entering the town with a traction engine and a tender, to which were attached by a halter a team of horses drawing a democrat, when a wheel of the tractor smashed a gas main in the roadway. The escaping gas ignited from the fire box of the tractor and both men were badly scorched about the head and face and one horse was singed almost bare. The flame from the break shot high into the air, thus lowering the pressure in the locality.

* * *

An Avery tractor school, for the instruction of dealers and farmers interested, was held in Toronto, February 24 to 28, under the auspices of the R. A. Lister Co. of Canada. The school, which met in the committee room of the Prince George Hotel, was in charge of O. A. Duis, of Peoria, Ill. All kinds of gas engines and farm power machinery were taken up in detail.

The school closed with a banquet at the Prince George, when short talks were given by W. S. Ellis, manager of the Lister Co.; Mr. Howell, assistant manager; Mr. Messenie, manager of the tractor department; and Mr. Duis. It is planned to hold other similar schools throughout Eastern Canada shortly.

The Willis Tractor Guide

FOR CRAWLER-TYPE TRACTORS

Operating upon a new principle it does its work independent of the regular guiding mechanism, thus while eliminating practically all labor connected with plowing, it effects a wonderful saving in the way of wear on tracks and steering mechanism. It is adjustable for hill side plowing.

IT SAVES ninety per cent. of wear on steering bands and drums.
IT ELIMINATES side draft and saves wear on tractor mechanism.
IT PERMITS running tractor close to the furrow.
IT SAVES twenty per cent. in power.
IT ENABLES an inexperienced operator to do a perfect job of plowing.
IT ELIMINATES all the work of steering and leaves the operator free to watch the plows.
IT IS ADJUSTABLE for twelve or fourteen-inch furrow.
IT ENABLES a small boy to do the work of a man.
BEING ADJUSTABLE from the operator's seat, it can be used successfully for hillside plowing.
WHEN NOT NEEDED it can be taken off in less than two minutes
IT WILL SAVE its price many times each season.
IT CAN be put on in ten minutes.

An Attractive Proposition to Jobbers

Willis-Flack Manufacturing Co.
1702 Wyandotte Street - Kansas City, Mo.

NEWS — OF THE TRADE FOR THE TRADE

The Jackson Garage Company have been appointed Chevrolet distributers for Oshawa and vicinity.

* * *

W. E. Moore has signed up to assist A. Oatman to handle the Chevrolet car in Tillsonburg and district.

* * *

The Studebaker Corporation will extend its South Bend plant by 1920 so that they will employ nearly four times as many people as at present.

* * *

The Massey-Harris Company, Limited, Toronto, has acquired a tract of 100 acres at Weston, Ontario, and will erect there several new buildings.

* * *

The Beeman Garden Tractor Company, Minneapolis, Min., has recently completed arrangements by which they will distribute their products in Canada.

* * *

A despatch to the *Mail* and *Empire* says that Norval A. Hawkins, former sales manager of the Ford Motor Company, is to be head of a consolidation of concerns making motor cars, trucks and tractors.

* * *

J. A. McIsaac, for some time Blockman of the International Harvester Organization on Prince Edward Island, has assumed new duties with the same company, and has been succeeded in his old position by J. A. Fraser.

* * *

Messrs. Thornberg and Stirling, Humboldt, Saskatchewan, agents for the Overland automobiles, have leased the building on Main Street next to the Ford Garage, and will utilize this as a show room for their cars.

* * *

The Kamsack, Saskatchewan, *Times*, reports that E. J. & P. N. Johnson have shipped three Chevrolet cars and two tractors to their Norquay sub-agency. This paper prognosticates a big year in tractors in this district. The Johnson brothers have a carload of farm tractors ready for distribution.

* * *

Messrs. Wm. Galbraith and D. Donaldson have opened up at 88 Water Street North, Galt, Ontario, in the premises formerly occupied by the Perfect Machinery Company, a modern and spacious garage which they have called "The People's Service Garage."

* * *

Hon. Finlay G. Macdiarmid, Ontario, Minister of Public Works and Highways, states that it is the intention of the Government to encourage the counties to carry on aggressive programs in connection with the construction of market roads under their control, suitable for every type of vehicle and machine.

* * *

A. A. Morden & Son, of Wellington, Ont., have secured the distributorship of the Cleveland Tractor for Prince Edward County. They exhibited the tractor at the Poultry Show, held on the 29th, 30th and 31st of January. This tractor is the little "tank" type and is designed by Rollin H. White, automotive engineer.

* * *

Gray Dort Sales, Limited, who hold the distributing contracts for the Gray Dort car in Calgary, Alberta, and vicinity, recently opened sales rooms at 813A First Street East. The partners in the new firm are A. G. Austin, J. Cobbledick and S. W. Code, all men well-known to Calgary motorists. C. B. Clarke and Fred Birmingham are on the sales staff.

* * *

It is announced that twine should reach the consumer at a lower price than during the last harvest, and these prices are quoted in the United States: sisal, 21¼; standard, 21¼; standard manila (550 feet), 23; manila (600 feet), 24¼; mixer (650 feet), 25¾; pure manila (650 feet), 27¼. Carloads, ¼ cent less; five-ton lots, ⅛ cent less; f.o.b. mill.

* * *

The International Harvester Company of Canada, Ltd., now owns the entire capital stock of the Oliver Chilled Plow Works of Canada, Ltd., located at Hamilton, Ont., and has assumed control and operation of this property. Its operations will continue under the new ownership with the present personnel. The manufacture of the types of plows now made at Hamilton will be continued and the Harvester Company will market them as heretofore through its own organization.

* * *

By an order in council, published February 24, it is announced that authority has been granted for the remission and refund for the customs duty on traction attachments designed and imported to be combined with automobiles in Canada, for use as traction engines for farm purposes and parts thereof for repairs. In order to expedite importation and delivery of the above-mentioned articles, it is stated that these may be entered at the Custom House as free of ordinary duty, until otherwise provided for.

* * *

The Hamilton works of the International Harvester Company, Hamilton, Ont., recently finished an order for a quantity of 22-38 International threshers, and, with the exception of a few machines turned out in an experimental way at the Deering works last season, this is the first undertaking in this line in any of the Harvester Company plants. The Hamilton organization is very enthusiastic about the finished product and is prepared to stand by the performance of the new machine in the field. William Huddle is the designer of this machine.

* * *

The construction of a made-in-Canada automobile, by the Willys-Overland, Limited, is announced by T. A. Russell, vice-president and general manager of the Russell Motor Car Co.

During the war passenger cars were assembled at the West Toronto plant of the Willys-Overland Company, and attention was concentrated on the manufacture of munitions. The machine tool equipment of the plant was wholly devoted to war work, including the manufacture of airplane engines. A peace program has now been developed that includes the manufacture of two models of automobiles, a popular-priced light four, equipped with electric lights and self-starter, and a higher-priced car, in which the Knight engine will be installed. Work will be commenced on the light four model almost immediately, and it is probable that it will be on the market by midsummer.

The reconstruction plans of this company include, also, the manufacture of gramophone motors, and a larger production of bicycles. The Willys-Overland plant will employ more than 1,000 men.

Changes in the company include the retirement of F. J. Sleight, who has been general manager of the company, and who is leaving Canada about the first of May to take up important duties in connection with the Willys interests in the United States. Mr. Willys is retiring from the presidency of the Canadian company, and will become chairman of the Board of Directors. T. A. Russell, formerly vice-president of the company, will become president. It will require some months for the installation of machinery before the company can enter upon full production. The capital stock of Willys-Overland, Limited, is being increased considerably.

See also page 26.

JOHN DEERE
WELLAND, CANADA.
THE TRADE MARK OF QUALITY
MADE FAMOUS BY GOOD IMPLEMENTS

To Dealers:

The name that stands for Quality and Service.

John Deere built up an immense business, because he made the best; a machine that would give the greatest service from the first. Only the highest grade material, and the most expert labor are used. Hence the world-wide reputation of John Deere Machinery.

This same policy of making the best, has been followed out in the manufacture of every implement of the John Deere Line, so that when you buy a John Deere Spreader, Hay Loader, Side Delivery Rake, Seed Drill or any other implement, you can be certain it is a safe investment—if it is a John Deere.

Further, no two John Deere Factories make a competing line. Each of them specialize in the line of goods made. This assures better and more uniform quality than when many different machines are built in one factory. Each of the John Deere Factories has an established reputation for building its line of goods, and is the leader in the manufacture of such implements.

In selecting a line of farm machinery around which you can afford to build up your trade, it is important to know what that line offers for the future. John Deere Implements have been on the market for over half a century.

Every dealer who has handled the John Deere Line, knows that repairs for any of John Deere Machines can always be secured promptly.

John Deere Service assures the dealer of quick shipment, and easier sales through their system of advertising.

Contracts for 1919 delivery are now ready. Write us for particulars.

JOHN DEERE WELLAND, CANADA.

John Deere Manufacturing Co., Limited

JOHN DEERE WELLAND, CANADA.

WELLAND - ONTARIO

Ready Sellers

LAST year's bumper record crop of 105 million bushels of potatoes opened the eyes of Canadian farmers to the splendid possibilities of the potato markets. Every farmer is a prospect for O-K Canadian Sprayers and Planters for getting bigger, better crops with less labor and time.

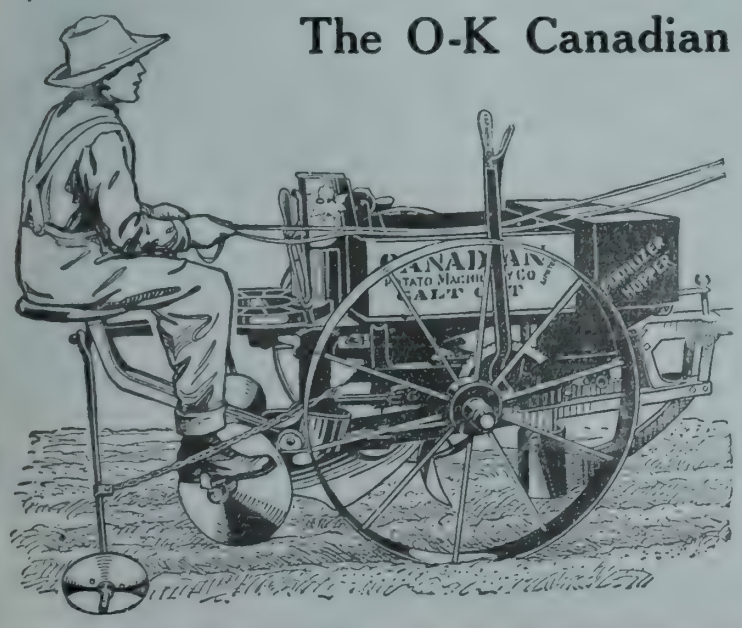
These tried and proven machines have demonstrated their efficiency both in the field and at Experimental Farms and Agricultural Colleges. No wonder they are ready sellers.

The O-K Spra

appeals not only to farmers and fruit growers for all kinds of spraying, but to motor car owners, decorators, etc. It is great for spraying potatoes, shrubs, trees, vines, bushes, for disinfecting barns and hen coops and for applying oils and washes to stock.

Every dealer should have a good stock of the O-K Spra handy. Its special curved lance gets the spray into the out-of-the-way places. The efficient non-clog nozzle, with thimble-shaped strainer, requires less attention than any other nozzle. These two points alone **clinch the sales!**

The O-K Canadian Potato Planter



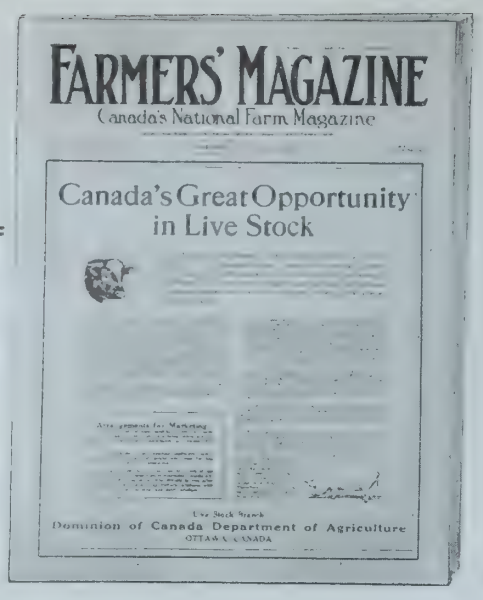
gets the planting done right without seed waste and in a fraction of the usual time. It is the only planter with the endless cup dropping device — the most accurate system ever invented. Besides, it has equipment for correct depositing of fertilizer. Write for contracts to handle this live-wire line.

O-K Canadian 2-row Sprayer

Here is a real ready seller and a wonderful time-saver. It works like a charm in the field, being operated like a wheelbarrow, and just as easy to push between the rows. It reaches two rows at a time and there is no stopping for readjustments once it is set for width of rows. The discharge pipe can be detached for spraying trees. Tank holds 8 gallons. Write for selling proposition and literature.

Canadian Potato Machinery Co., Limited

No. 36 Stone Road, GALT, ONT.


FARMERS' MAGAZINE
Canada's National Farm Magazine
Canada's Great Opportunity in Live Stock
Dominion of Canada Department of Agriculture
OTTAWA, CANADA

A Sure Way to Increase Your Profits

Read FARMERS'—Canada's National Farm Magazine—it will keep you posted on farm conditions — enable you to meet farmers on their own ground—help them solve their problems and gain their good-will.

FARMERS' is a high-grade agricultural Magazine—brimful of the sort of information which appeals to the real leaders in their respective communities—the very people to whom you want to sell farm equipment, automobiles and accessories, they are the first to buy—they influence others.

Easy to Sell Products Advertised in Farmers'

Study the advertising pages carefully—see what products are advertised in FARMERS' and make it a point to sell them—to push them; it takes less time and effort because the advertising makes a direct appeal to prosperous and progressive agriculturists. The advertisements in FARMERS' help you in a big way—make it easy for you to sell goods—increase your profits; **the greater your co-operation the greater your profits.**

Read FARMERS' regularly—push the products advertised in FARMERS'—it pays. **The subscription price is only $1.50 per year—sent to your home address. Send your order to-day.**

FARMERS' MAGAZINE

The MacLean Publishing Co., Limited

143-153 University Ave., Toronto, Canada

Accessories and Repairs

NOTE.—*Normally, more space will be devoted to accessories and repairs, but this month we received such a splendid article on accessories by C. Dixon, bicycle and and accessories sales manager of Hyslop Bros., that this article has been run more prominently than space here would permit. It will be found on page 10.*

It is estimated that every car owner will spend $60 per year on accessories—apart from gasoline and tires. The business done in accessories in Canada amounts to an astonishing total, being almost one-seventh of the aggregate spent on buying cars. During 1918 there was spent on accessories in Canada the huge sum of $6,495,868.

* * *

LUBRICATING THE CAR

An important direction in which we may hope to see material improvement in the near future is in the methods of lubricating automobiles. It is said that on some cars there are as many as 74 points where some sort of lubricant must be applied. Many of these are entirely inaccessible, and there is but little doubt many of these points are never discovered by the amateur owner who cares for his own car. A few years ago a car was brought over from the other side that contained a most ingenious, and apparently efficient, lubricating system in which there were but a very few points for the application of the lubricants, and these were all in plain sight and easy to get at; but as this car did not gain a foothold here its good features attracted but little attention. Now the matter is apparently being taken up by some of our manufacturers, and it is hoped that a much needed reform will result.

* * *

FITTING NEW PISTONS AND RINGS

In fitting new pistons and rings to an engine, where time means money, as it often does, the pistons should be smeared with a thin paste of graphite and oil. This will help to hold the compression while the rings are new and do not make a gas-tight joint with the cylinder walls, as they will later after they have worn a little. By using the graphite, the engine will be able to handle its full load sooner than it would ordinarily after fitting new pistons and rings, unless they were ground in.

* * *

MACHINERY OPENS NEW FIELDS

The cultivation of fibre plants in the Philippines has been confined chiefly to areas near the coast where the leaves could be soaked in the sea water to soften the pulp and facilitate cleaning the fibre by hand. Cantala, or Manila maguey, was produced more extensively because the plants were more easily obtained and this fibre was more easily cleaned by hand. Its value for use in binder twine is greatly impaired because the salt from the sea water in which the leaves are soaked attracts crickets and grasshoppers.

* * *

Time and again farmers ask where they can locate parts for a make of mower, manure spreader, treadmill, or such implement. One farmer had purchased a second-hand treadmill and was unable to find where to get a pinion to rig it up into service.

One word on the almost weather-beaten frame was all the clue he had.

This man sent the inquiry to one of the editors of the MOTOR, TRACTOR AND IMPLEMENT TRADE JOURNAL, and he was referred to the very maker.

Another case is reported of a farmer who wanted a repair for a harrow cart. He had purchased it at an auction and did not know the name of its manufacturer. Time and the elements had long since previously removed the paint that gave the name of the maker.

Only the raised number on the broken part was visible.

A search in the catalogues of a well-ordered machine agency soon revealed the machine.

The files of the MOTOR, TRACTOR AND IMPLEMENT TRADE JOURNAL will always be at the service of dealers who want information. A filing system for agents in their own warehouse offices is a very useful thing also.

* * *

ARE THERE ANY NEW MACHINES

If there are any new machines in your immediate territory, why not secure their catalogues at once and be able to tell a man, who may incidentally inquire of you, the cost of your getting his spare part? Such ready knowledge always makes the farmer appreciate your service.

* * *

URGE FARMERS TO REPAIR

It might be well to keep a line in your ad. in the local paper, asking farmers to examine their machines ahead of the time they expect to use them, in order to see if they require any new pinions, new springs, bolts, castings, or other repairs, so as to ensure your getting these repairs to them promptly. Railways are not always prompt, and much waste and delay will ensue, as well as lessened costs of rush orders. Appeal to the farmer to do this, so as to save himself money, and he will sit up and take notice.

* * *

SAVING FROM REPAIRS

There is a good deal of machinery thrown away every year because the owner is not careful to see just what is the matter, says Earl Rogers in "Power Farming." I have in mind a mowing machine that was just about to be discarded because the pitman bearing could not be replaced without putting in a whole new bearing and shaft. The information of this kind was, of course, given by a salesman who wanted to replace this with a new mower. But another repair expert came along and said they could get the piece that was worn for about 60 cents, and the owner did. It saved nearly that many dollars.

Another neighbor bought a corn binder that was completely "done for," as was supposed, for $10, and with about $5 in repairs he has been able to run it for three years, and it is in good shape for a lot more work. I know of another machine that sits idle that could be repaired for a few dollars, but the owners bought a new one and have no use for it.

I saw a hook husking peg a few days ago that was discarded because it was short just one rivet. Fifty cents could be saved by fixing it.

A whole plow will be thrown aside sometimes just because a coulter is worn or a share too thin or a landslide did not work just right. A little examination will show where the trouble is a good many times.

ANNOUNCEMENT

It is a pleasure for this Company to announce that Professor W. H. Day, who has been officially connected with the Ontario Agricultural College for 12 years, at the head of the Department of Physics, has purchased an interest in and has become associated with, as Secretary and Manager, the Shinn Mfg. Company of Canada, with offices and factory at Guelph.

Professor Day is recognized throughout the Dominion and the United States as an Expert on Lightning Prevention. His Bulletin on the subject, published in 1914, is recognized as one of the scientific authorities on the subject, and it is no small compliment to the Shinn System of Lightning Prevention, that he has chosen it in making his permanent association.

Shinn-Flat

PREVENTS LIGHTNING LOSSES

Shinn-Flat Lightning Conductors are distinctive and more efficient. They are woven flat, and have 36% more conducting surface than the same amount of material woven in a round cable.

Every progressive dealer in Canada will want the 1919 Contract for Shinn-Flat Lightning Conductors.

Write for full information

SHINN MFG. COMPANY OF CANADA

GUELPH, ONTARIO

Lightning Can't Strike IF Shinn Gets There First

MADE IN CANADA

BUFFALO OILS

Quality Oils for Every Farm Purpose

You cannot get the best results in your machinery operations unless you use **quality** oils and greases. The quality of BUFFALO OILS has been thoroughly proven —they are Western Canada's favorite brand.

There's a Buffalo Oil or Grease to meet every requirement of the farm. Put them to the test.

BUFFALO OILS INCLUDE

Automobile Oil	Gasoline Burning Oils
Tractor Oil	Transmission Greases
Gas Engine Oil	Cup Grease
Steam Cylinder Oil	Crank Pin Grease
Machine Oil	Graphite Grease

PRAIRIE CITY OIL CO., LIMITED

Winnipeg - Manitoba

MR. IMPLEMENT DEALER!

SELL

Buchanan's Cow Stalls, Stanchions, Haying Tools and Water Bowls

TO THE FARMERS

and you will make them satisfied customers.

Buchanan & Co offer you attractive discounts and give their Agents good treatment always.

Write for terms and prices to

M. T. BUCHANAN & CO.

Ingersoll - Ontario

Indispensable on the Modern Farm

Just as important to the modern farmer as the plough with which he breaks the soil is the Martin Ditcher and Grader for keeping the broken soil sweet and in the proper condition for the best crops. That is why

The Martin Ditcher and Grader

is important to the dealer in farm implements. Ditching and draining keep the soil in condition, prevent rot and aid early germination. Your farmer customers appreciate this fact and when they see the Martin Ditcher and Grader they will quickly appreciate its value.

The Martin is a quick-selling proposition because it more than pays for itself within a comparatively short time, because it is as simple to operate as a plough—has no levers, no cogs, no wheels, no complicated mechanism.

For ditching, grading, tile ditching, backfilling, terracing and road grading the Martin Ditcher and Grader is the handiest and most economical of all farm implements. Be ready for the demand. Write us to-day and ask us more about it.

The Canadian Fairbanks-Morse Co.
Limited

St. John Quebec Montreal Ottawa
Toronto Hamilton Windsor

Massey-Harris

What the Massey-Harris Line Means to the Agent

A Complete Line Backed by a Great Name

Here is what the Massey-Harris line of Farm Implements means to the Agent:

An old-established business, well and favourably known for three generations, with a most enviable record for integrity and square-dealing. A line of implements famous the world over for reliability, efficiency and economy — economy on account of their long and satisfactory service to the farmer, which helps to make future sales for the agent.

Canadian implements — Canadian capital co-operating with Canadian labour to produce implements especially adapted to Canadian conditions, and, therefore, appealing to the farmer on the grounds of good business and patriotism as well.

A line which is extensively advertised in the farm papers and in other ways, so as to pave the way for the local agent or canvasser, no time wasted in explaining what the name Massey-Harris means.

A full line of implements under the one name; talking one implement helps the whole line, and each implement sold is a help towards selling another.

Experienced travellers and salesmen to help round up the difficult customers, and competent experts to render assistance in the setting up or operating of machines.

If not fully acquainted with the Massey-Harris line, it will pay you to write to the nearest branch for catalogs and further information.

Massey-Harris Implements are Easy to Sell
---and they Stay Sold

MASSEY-HARRIS CO., LIMITED

HEAD OFFICES: - TORONTO, ONT.

Branches at

Montreal Moncton Winnipeg Regina Saskatoon Swift Current
Yorkton Calgary Edmonton. *Transfer Houses*---Vancouver and Kamloops

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1½-TON TRUCK

3 Dominant Selling Points

1. **Does 80% of all hauling jobs.**
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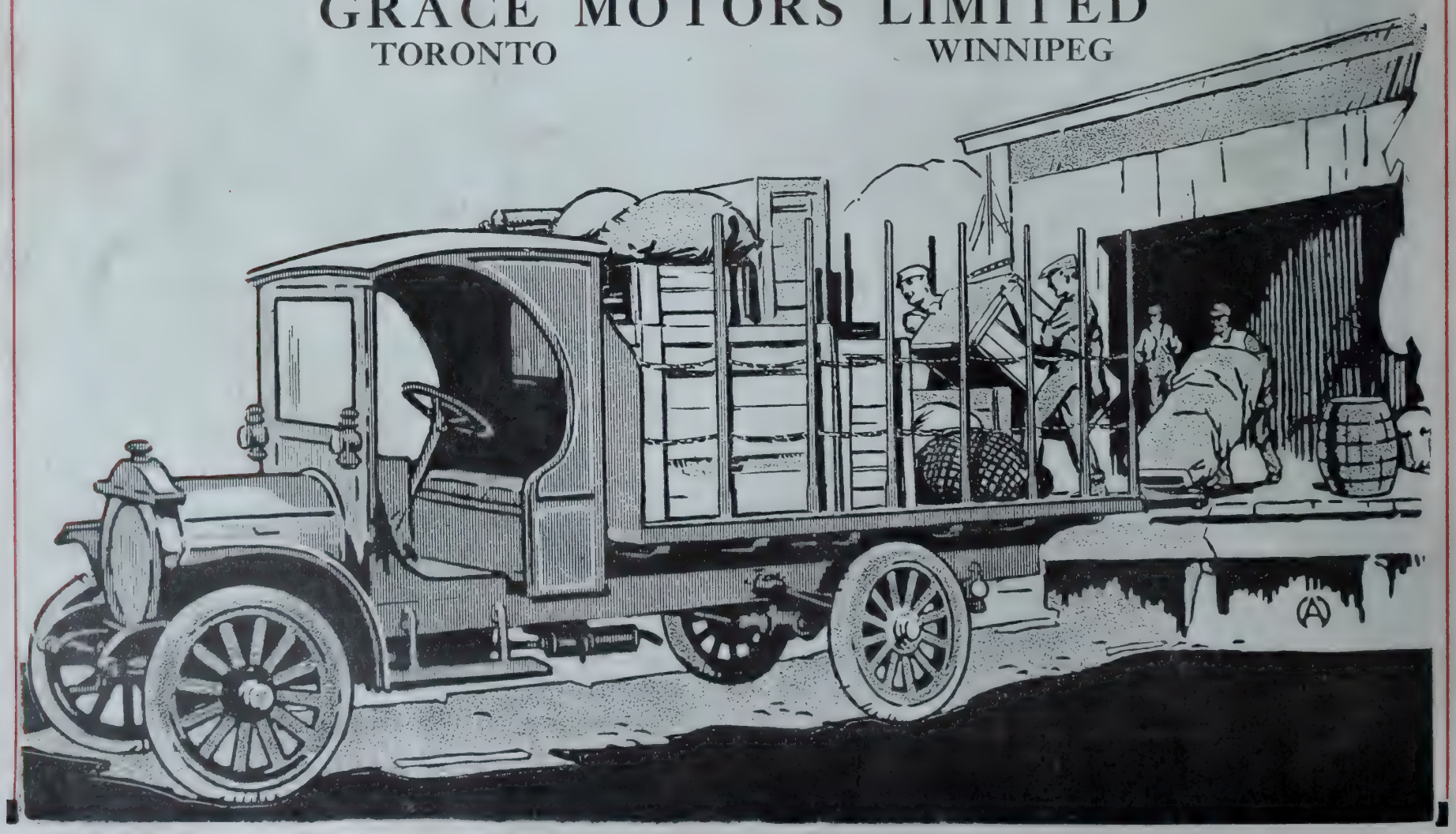
3. **Most truck for the money.**

A great big, sturdy, honest 1½-ton truck at the lowest price in the market. Built by the largest exclusive builders of 1½-ton jobs. A postal card will bring you an interesting dealer proposition. No obligation on your part, of course.

Wire us——before the other fellow does.

$2422 f. o. b. Toronto

GRACE MOTORS LIMITED
TORONTO WINNIPEG



CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Published Monthly by THE MACLEAN PUBLISHING COMPANY, LIMITED, Toronto, Montreal, Winnipeg

VOL. 1, No. 2 APRIL, 1919 Subscription Price $1.00 Per Year

Fairbanks-Morse Power Farm Equipment

—represents a standard of efficiency and economy on the farm that has established it from one end of Canada to the other. This in itself is a sufficient reason for every dealer who does not carry Fairbanks-Morse equipment for the farm to do so—and for the dealer who has already stocked these lines to push them to the end that means greater profits.

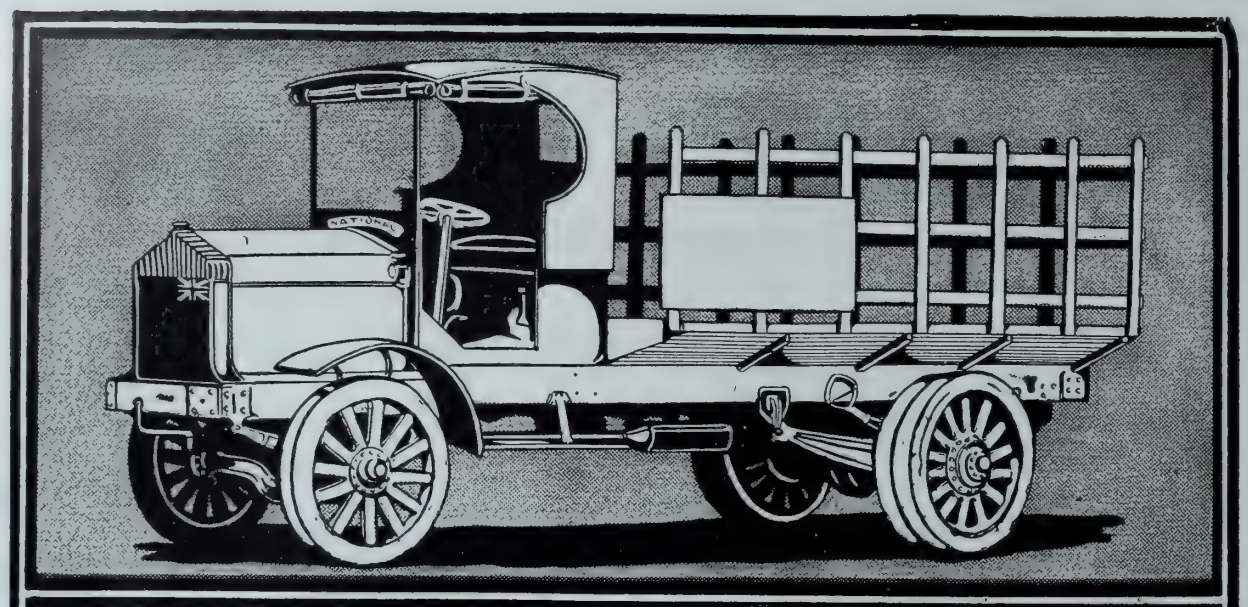
Whether for the farm home, the dairy or the field, Fairbanks-Morse Power Farm Equipment is the equipment you should carry.

"Z" Engines
Martin Ditchers
Feed Grinders
Lighting Systems
Pumps
Case Tractors
Ensilage Cutters
Water Systems
Sawing Outfits
Scales

—also a complete line of automotive equipment for all makes of trucks and automobiles.

The Canadian Fairbanks-Morse Co.
Limited

St. John, N.B., Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria



Built in Canada

For Canadian Conditions.

Day by day National Motor Trucks are wiping out old notions of what motor truck service ought to be—establishing new records of efficiency, reliability, and economy.

And here's the reason. National Motor Trucks in their entirety are the product of **specialists**. Each part, in turn, is built by a specialist. The National engineers have drawn upon the best "motor truck brains" of the entire world. Combining standard features with the scientifically correct National designs produces a maximum of motor truck value which, we believe, has never been equalled. Put National side by side any other truck—and choose. That's our challenge to you!

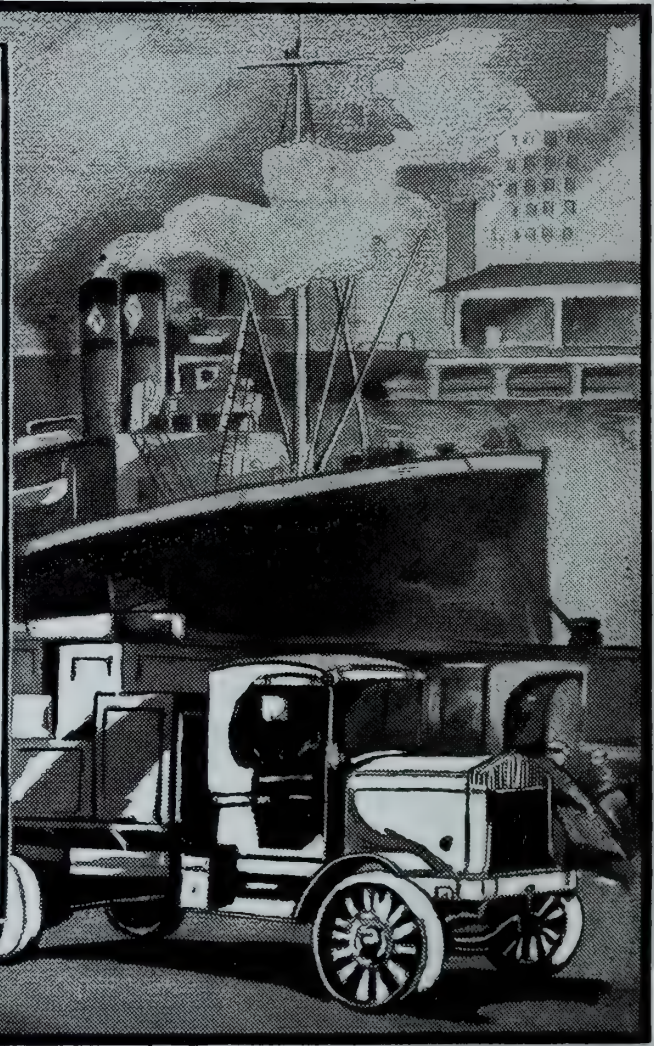
Familiarize yourself with the standard of value by which you can make comparisons. You can't afford to buy on hearsay, guesswork, or sentiment. National facts and figures are convincing. Ask for them.

Five Models—1 ton, 2 ton, 3½ ton, 5 ton trucks and 6 ton tractor.

NATIONAL STEEL CAR CO., LIMITED.

HAMILTON -- CANADA

Write for Illustrated Catalogue and name of the nearest National Dealer



NATIONAL
MOTOR TRUCKS

Lister
POWER ON THE FARM

The Lister Line means good profits plus satisfied Customers

MELOTTE SEPARATORS
Over 50,000 in use in Canada

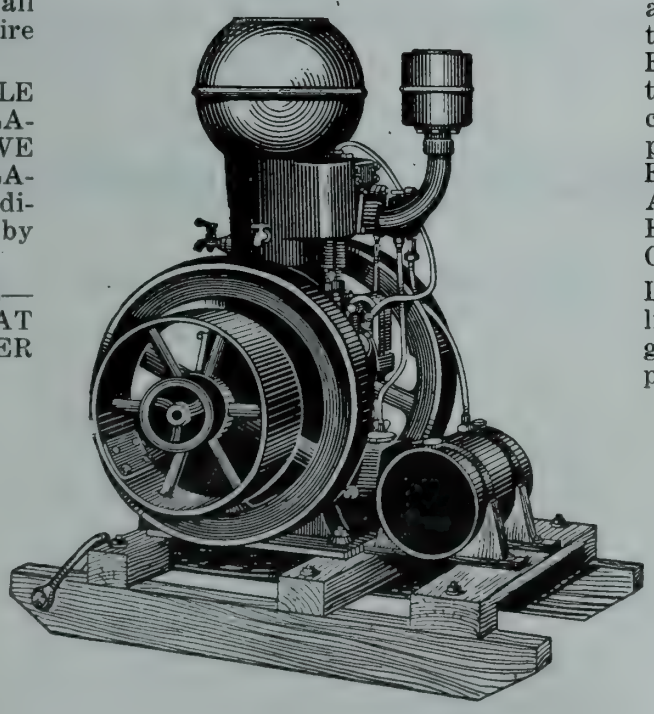
AVERY TRACTORS
Built in seven sizes. A size for every size Farm

Lister Milkers

Owing to the natural action on the cow's teats, it milks all grades and breeds with entire safety. The cows like it.

THERE IS NO TROUBLE AFTER THE INSTALLATIONS ARE MADE, AND WE MAKE ALL INSTALLATIONS. A system of periodical inspection is maintained by the Company.

A VERY POPULAR LINE—OVER 360 SOLD IN GREAT BRITAIN IN THAT NUMBER OF DAYS.



Lister Engines

The high grade of materials and workmanship employed in the manufacture of the Lister Engine, its superior construction, equipment and finish, combined with its great simplicity, render it THE MOST ECONOMICAL AND RELIABLE POWER AVAILABLE FOR THE USE OF THE CANADIAN FARMER.

Lister Products are old-established and well-advertised goods. Write for our agency proposition.

LISTER SILOS AND FILLERS
A good silo well filled—can be operated by as low as 5 horse-power.

LISTER GRINDERS
Guaranteed greater capacity for size than any others.

R. A. LISTER & COMPANY (CANADA) LIMITED
58-60 Stewart Street, TORONTO Also at Wall Street, WINNIPEG

Fairbanks-Morse
Automotive Equipment

—occupies such a position in the automobile accessory trade of Canada that practically every dealer carries at least one or more of the Fairbanks-Morse lines.

Is this not proof positive that you as a dealer in automobile accessories should stock the Fairbanks-Morse lines? Each line has been selected by us for its superiority. It has passed the test of our experts before it becomes associated with the name.

The Canadian Fairbanks-Morse Co.
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St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria

Ask your nearest branch office to tell you about Fairbanks-Morse Automotive Equipment.

CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Volume I | TORONTO, APRIL, 1919 | Number 2

The Evolution of a Motor Car Owner

How I Acquired Wisdom—*By* J. C. INMAN

Illustrated by WILLIAM CASEY

OUTSIDE by the side porch stands the new car. This spring day it is good to look at and while I have not quite the same feelings for it that I had for the old Speednot when I proudly steered her up to the self-same porch on a hot July day some two years ago, there is something about this new creation that seems to tell me that there is more in her in the way of good times ahead than there ever was built into hat original pet of mine which alternately went and then went not.

This new car is a good old reliable make. It is a Jones and there isn't a single thing on her that cannot be found on a half dozen other good cars of her class and style. She's made up of good parts that have been used for years and when she gets worn out and needs fixing I know that any garage man that is a garage man can fix her up in no time at all.

That old first car of ours —that Speednot—was not just quite what we had expected her to be. You see we bought her from a friend who had decided to buy a bigger car so he could take the whole family out at one time and not have to take them out in sections, so to speak. The Helpem family had not been what you could really call friends of ours until after I happened to meet Helpem in the Downtown Garage one day and he told me he was looking at a new car and when he got it home he would come over some evening and give us all a ride. Well, I thanked him very much and then, as an afterthought, I said we might get a car ourselves in a few weeks if we could find just what we wanted.

Right away Helpem said he had a roadster he might let go but he had figured on having two for the season, as it was so handy to have two around all the time, for wet weather and times when a big car wasn't just the thing. Mrs. Helpem nearly cried when she thought of letting that car go and Helpem himself could hardly contain his feelings, but they would simply have to try and get along some way as we really needed it more than they did. Helpem said he was sorry she wouldn't run well yet this spring as he hadn't had time to get her fixed up and she needed a new tire or two, but he'd try and fix it with the garage people and see if they couldn't get her started for me.

WELL, the Downtown people towed her over to their shop and they fixed her up. Helpem said she had a good motor and a good motor was the heart of a car; the rest didn't matter much. The motor was all right, but there were parts that needed to be replaced, the garage people said and the differential was not in good shape, and the clutch wasn't working right. It would be best, they said, to have new tires on all four wheels and then there would be no trouble and, besides, the old tires could be carried for spares in case of blow-outs or punctures. She didn't look very new and so they painted her for me and after about a month I took her out and Helpem taught me to drive.

Well, I was kind of new at it and when we got on the Cedar Springs hill she stalled and I had to back her up and try it again, she had a good motor, Helpem

"Then we slid back down hill."

said, and told me to 'give her the gas' so she would dig in and go up. I got her going well and then let the clutch in and she started all right, but she didn't go far because she made an awful noise down her insides somewhere and then we slid back down hill and stopped.

Helpem said I had let the clutch in too hard and that she had stripped her gears. He said she had a way of doing that unless you were careful and I'd have to watch myself after this.

The Soakem Garage people came out and dragged her in and they fixed her up, and about two weeks later I steered her in by the side porch just like I did this new car three weeks ago. I don't like to say much except that she didn't turn out like we expected. She was a good car and she had a good motor, but we didn't run her much that year because we had her only part of the time. It took so long to fix her up at the Soakem Garage when some little thing went wrong that winter came on and we didn't take many trips around town even, as we found from experience that it was pretty much a gamble as to when we would get back home again.

You see the Downtown Garage people didn't use me just right, I thought, when they 'fixed up' the old speed- not when I bought her from Helpem, and so I got to dealing with the Soakem Garage because they said they could fix anthing on any car and they did it right no matter how long it took. When they got through with a job they said it was fixed right and they took pride in doing good work. They did a lot of work on the old Speednot but along when the next spring came around they said I had better trade the old 'bus in on another car and then I would have no more trouble. They said they had a good Junkpile car, that had just been overhauled, which they would trade if Mr. Baker, the banker, didn't decide to take it by the end of the week. We took the Junkpile car out and tried it out around town and it did run pretty smoothly after the old Speednot, and so we traded because I wasn't going to let that banker Baker get ahead of me on a deal.

The Junkpile was a pretty good car except that it wouldn't run in the country because it was pretty old and it didn't have the power and when we did take it out in the country we always broke something and had to be towed in or else get help to get fixed up. She had been overhauled, you see, and the Soakem people said she was just like a new car and had to be used easy for awhile, until she got her bearings running smoothly. We used her pretty carefully for two months and then she got so weak that we had to get the Soakem people to overhaul her again and put on some new tires. She was a good car, you see, and she had a good motor and her rear axle had never been out. We had a starter put in her and a speedometer and a tool box put on. It cost us a lot of money but the Soakem people said it was worth the money as a convenience and then when you had a speedometer you were not so liable to get speeding and be arrested. Well, so far, we had never had any trouble about speeding because we couldn't go that fast; but getting her fixed and everything we thought we might be better off and feel safer.

They got her fixed up for us late in the summer and we ran her some when we got a chance and the starter and things would work. A man that knew all about cars said the starter we had put in the car wasn't the right kind of a starter for it because it was made for any car, and the starter had to be made for the particular car it was designed for. I guess he was right and knew what he was talking about because we never had much success with her after that starter was put in. It didn't seem to work right for some reason and we had to get her fixed a lot.

This spring we figured it all out and it just looked as if we had to have a car that would go where we

wanted to go and for some reason the old Junkpile didn't seem to be much better than it was last fall. We had some trouble with the motor right off and then the tires looked pretty bad in places. You see, we couldn't keep the wheels lined up so they wouldn't wear the tires on account of the Junkpile being an old car and not up to much. We started out to see just what there was in cars and we got all kinds of literature and we saw more cars than we ever thought were made. We sort of picked on the Newstyle, which had a new type motor so strong it could take all hills on high and the springs were new, too, and you rode along as if you were in a boat. Next to the Newstyle the Mammoth took our fancy as it was so big and strong that you could take the whole family and all your friends without trouble.

WELL, we didn't want to buy in a hurry because we wanted to look around and so we just kept on looking around. We looked at so many that we finally got all mixed up. There were so many cars with so many different features and none with all of those features which each salesman said were so necessary in a good car, that we pretty nearly gave it up in despair. We did find out, however, that the Newstyle was not the car we wanted because the motor really wasn't just right because it used a lot of gas in order to get its power. Then the gears were not strong enough for the motor and they broke down every now and again. The Mammoth was alright for going around town but when it came to the country she couldn't even pull herself, let alone the whole family and the friends.

After a while we came to see that the Smith cars and the Brown and Jones cars were all pretty much alike and that there were more of them in use than all the others. Many people had bought these cars and then when they had worn out they had turned right around and bought another, so we thought that if other people liked these cars we would like one too, and so we looked them all over carefully. We finally picked on the Jones car as it looked nice, in addition to being good, and they had service stations all over the country so we could get it fixed any time we might happen to have an accident, or some bad luck. It was a good, strong, roomy car and the salesman took us all over to the bad hills and places where we used to get stuck with the old Speednot and the Junkpile, and it was so easy to operate and handy that we knew right away that it was just the car we had been hunting for.

Well we couldn't afford two cars so we sold the old Junkpile to a friend who didn't want to put too much money in a car and I guess it will be a pretty good car after he has the motor fixed a little and the starter changed to suit the car. The tires may have to be replaced before he starts to drive it, but he didn't feel like putting so much money in a car at one time. We hope he has good luck with it and after he gets it in shape so it will run I'll try and take a day off and help him learn to drive. Then I can show him a few things about the car that will help him along in case he has trouble at any time.

I think he'll like her alright because its a good car and she has a good motor and that's all that really counts.

One Western grain farmer has made use of the labor shortage to his advantage in an interesting and novel way. The operation of his tractor-drawn harvester normally requires the services of three men, but by the exercise of ingenuity the necessity of the third man's assistance was obviated. The agriculturist, who was also a pretty good mechanic, extended the tractor controls rearward so that they could be manipulated from the forward seat of the Harvester machine. Thus, as well as solving his perplexing problem in this satisfactory manner, the farmer also saved the wage of the unavailable harvest hand.

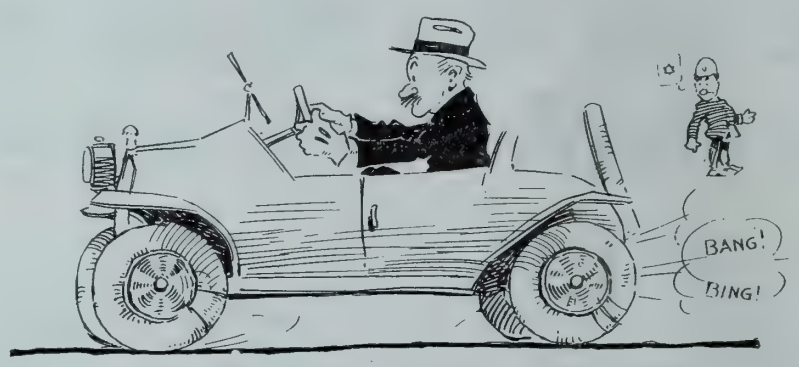
* * *

The heavy track-laying type of tractor is able to cross soft ground where the mud is not sufficiently hard to support men or horses. An eleven-ton tractor recently pulled a loaded trailer across ground of this nature and was enabled to do it for this reason: The man of average weight puts a pressure of at least nine lbs. to the square inch on the soles of his shoes, and the unit pressure of a horse upon the supporting surface is much greater; but the tractor, heavy as it is, bears upon the large surface of its creeper treads with a pressure of only three and a half lbs. per square inch.

Which is the Better Merchandiser?

Implement Dealers	Automobile Dealers
Long-time payments.	Cash terms.
Old-timers with ancient business policies.	Newcomers with modern ideas.
Ordinary sales organizations.	Extraordinary sales organizations.
Old business buildings.	New and modern buildings.
Service department the exception, not the rule.	Service department the rule, not the exception.
Experience—farm implements with which the farmers are already familiar.	Experience — automotive construction, which the farmer needs to learn.

A MAGAZINE writer, who must have once lived in some unusual part of the country where he found the implement dealer not as "live" as he should be, has recently contrasted the implement man and the automobile dealer in the above fashion. His conclusion is that the chap who sells motor cars is a better merchandiser than the implement salesman.



"So far, we had never had any trouble about speeding, because we couldn't go that fast."

It is not our intention in any way to disparage the claims made for the automobile dealer—they state the facts quite fairly.

But—

We want to state most emphatically that justice HAS NOT been done the implement dealer. Taking each of the six remarks in order we find:

1.—Longtime payments: This criticism is, perhaps, valid. But, within the past few years a great change has been taking place. The implement man is decreasing, rapidly, the period of time over which he permits payments to be spread. And, wherever he can, he points out to his customer the fallacy of time-payments, their essentially unbusinesslike aspect. The implement dealer, from one end of Canada to another, is educating the farmer in this regard. Wherever we have talked with dealers in Ontario during the past few weeks this question has been discussed, and in several warehouses signs were posted urging cash payments. The selling of spares and repair parts has practically reached a cash basis to-day.

2.—Old-timers, with ancient business policies: Hats off to the old-timer! It is he who has built up the implement business, and developed it to its present high standards. He has given the farmer an honest service, and "carried on," so that the farmer trusts him implicitly. These "ancient" policies are sometimes in need of renovation, it is admitted, but they have served to stabilize trade relations between the farmer and the implement dealer.

3.—Ordinary sales organization: Is there any harder prospect anywhere to sell goods to than the "horny-handed son of the farm?" Is there a much more difficult proposition than trying to sell to a farmer goods about which he is, at least, as fully informed as is the dealer? Surely, it is self-evident, that no merely "ordinary" salesman could do this, year in and year out. It may be that more efficient and thoroughly aggressive co-operation on the part of the implement manufacturer would have been welcomed, but now, to a certain extent because of the stimulus provided by up-to-date auto manufacturers, the implement maker is giving as live "service" to the dealer as could be asked for.

4.—Old business buildings: The present day implement dealer cannot be justly criticized on this score. There may be a few who still lag behind the times, but in towns we have visited lately we have found neat, snappy, clean and attractive stores and warehouses—to mention only a few places visited by representatives of the CANADIAN MOTOR, TRACTOR AND IMPLEMENT TRADE JOURNAL there are Tillsonburg, Renfrew, Arnprior, Brockville, Cornwall, Chatham, Brandon, Minnedosa, and Calgary.

5.—Service department the exception, not the rule: Why, the implement dealer was giving service before the automobile man was born! As a permanent factor in the community—some of them for three generations, grandfather, father, and son—they realize their responsibilities and shoulder the burdens of service, for they know that payment will come, directly or indirectly.

Who is it that, in the early days, left his business at any hour of the day or night to be of help to the farmer? Who is it that went out on the farm and started the gasoline engine, when the engine was new to the trade? Who was it that taught the farmer the use of the mower, when and how to fill it, and kept the mower in repair? Who is it that is to-day not only demonstrating, but installing and operating the farm light plant? Who is it that attends the manufacturer's school that he may learn how tractors are built, operated and kept in repair? Who is it that knows even automobile construction so well that the farmer comes to him for advice? Is it necessary to say that it is the implement dealer who has done, is doing and will continue to do all these things?

6.—Experience—farm implements with which the farmers are already familiar: Live implement dealers realized years ago that automotive products would shortly be steady sellers, and many prepared themselves. For years they have been used to engines of all kinds, and their experience is one of their greatest assets. Those who know claim the implement dealer is not one whit behind the auto dealer as a salesman of cars. Implement dealers in Canada, who, during the past ten years, have taken a selling agency for cars, have invariably made a success of it.

The magazine writer who made the above comparisons must be—is—laboring under an hallucination. He must have written it sitting in his office chair, with the whirl of the city as his sole inspiration. His facts must have been drawn from that long-ago period when he lived in the country, in the 'eighties or 'nineties; we're willing to wager he hasn't seen a real implement dealer's place for 'umpteen years. If he has, it must have been as he scooted past in his car at forty miles, and murmured:

"Huh! That must be the 'tank-town' where I lived as kid!"

To too many city dwellers every town with less than 100,000 inhabitants is a "tank-town."

A TRACTOR'S MANY USES

Labor requirements per acre have been tremendously reduced on all farms where the tractor has been installed. In the times when a labor shortage may occur in any district the value of the tractor is clearly demonstrated. Even where there is no labor shortage the purchase of a tractor will release a great percentage of the farm hands employed for more productive labor. Did you ever stop to think to what uses the present-day tractor may be put? They are almost too numerous to mention, but include road draining, digging and filling ditches, pumping water, moving houses, sawing wood, running threshers, binding corn, pulling stumps, and many other usual and unusual operations.

Breaking into the Implement Business

The Experiences of a Live Salesman

By R. LAIRD BRISCOE

THE sudden popularity of the tractor and the gradual linking up of the motor and truck business with implements have been two factors in creating new conditions in the work and life of the agent. The implement business has been put on a broader basis and the agent finds to-day that he is facing new conditions.

It is interesting to find a progressive man breaking into the field at a time when these new conditions have to be reckoned with. Such a man is Walt Moore of Tillsonburg, who bought out the McRae business in the home of oatmeal last fall. Mr. Moore was formerly a traveler with Beatty Bros. of Fergus, and he had a well-deserved reputation for sane and keen salesmanship. Those who knew him were sure that he would be very successful in his new venture and it was suggested to the editor of this paper that it might be a good idea to tell the readers just what Mr. Moore was doing. So a special trip was made to Tillsonburg to see what Mr. Moore had done and what he planned to do during the coming season.

An outside view of the office and warehouse of Walt. Moore, Tilsonburg; Mr. Moore himself in the foreground. The arrows indicate two of his valuable side lines.

It developed early in the talk with the new agent that he had fully sensed the necessity of broadening the scope of the business. He had taken on several new lines and was planning to add still further to the goods he had to sell. Considerable attention had been paid to the pushing of the new lines during the winter months with the result that very satisfactory results had been secured. He had become convinced also of the necessity of advertising. In fact, he was planning to expand the business on approved progressive lines.

Creating Demand For New Lines

It was natural that one of the new lines taken on had been selling them for his former employers and he knew the possibilities of the line. So he decided to introduce the idea of power washing machines strongly to the attention of the good people of Tillsonburg. He put one in the very front of his place of business (the arrow at left of illustration indicates the position) and left it there continuously for months. People passing in and out or passing on the street could not fail to see it.

Then he advertised washing machines in the local papers. This, by the way, was the first shot in his advertising campaign.

"It showed me what could be done in that way," Mr. Moore explains. "I sold one a few days after the first ad appeared and I got all kinds of prospects as well. Results since have shown me that the line is going to be a good one to carry. More important still, though, it has shown me what can be accomplished by advertising and display."

Taking On Automobiles

The very day that a representative of this paper saw Mr. Moore—it was some weeks prior to the date of issue—he signed up for an automobile agency.

"I've been convinced for some time," he said, "that implements and automobiles go together. In the regular run of business I have to get out and see the farmers of this territory and there is no reason why I shouldn't attempt to sell an automobile when I run across a prospect. As a matter of fact there are lots of prospects out in the country nowadays. To my mind the average farmer is a better prospect for a motor car to-day than the average city man."

As he appended his signature to the contract which gave him the right to sell a certain popular make of automobile in a certain slice of territory, he remarked: "I'm convinced that every implement dealer, who hasn't already done so, will be doing this soon."

At that time, Mr. Moore was planning to start out in a day or so on his active spring canvassing campaign. He is a firm believer in the theory of going out after business. His experience on the road taught him that the man who got the most business was the man who hunted out the business for himself. It was his intention to keep his automobile agency pretty well in the forefront when he started out to dragnet the country for spring sales.

Mr. Moore's term in the business has been short but it has been punctuated by a number of interesting experiences. He has been studying conditions closely and has arrived at certain conclusions. One branch that he has paid particular attention to is the second hand implement department.

"So many dealers lose money on taking old implements off the hands of the farmers to whom they sell new, that I made up my mind at the start that I wasn't going to be caught," he explained. "I believe it is possible to even make a profit on this necessary feature of our business."

Some Worth While Ideas

He does not believe it is advisable to even take an old implement unless it gives promise of being saleable after a certain amount of repair work has been done. Mr. Moore has paid a great deal of attention to the matter of securing prospects for second-hand machinery. Everywhere he goes he keeps his weather eye open for such prospects. On practically all occasions where he has found it necessary to take over used machinery he has known almost to a certainty where he could place it. On a number of occasions he has sold the old implement within a few days, sometimes without loss, sometimes even at a small profit. At the time the representative of this paper visited his place, he had only two "hang-overs" of this kind on hand and one of them was sold but waiting for shipment.

Keeping Repair Parts

Mr. Moore is using a system of keeping repair parts that his predecessor initiated and which he believes has many good features. It consists of a series of small wooden compartments. Each row is given over to parts for one certain implement and each compartment bears the same number. Thus if a part is wanted for a harrow, the agent looks in the row marked 5 until he finds the right one. Each compartment is small and contains only a supply of one part so that there is no difficulty in finding anything that is required and supplies do not get mixed up. Another great advantage is that the stock can be kept sorted up with little or no difficulty.

Mr. Moore intends to develop this system still further, believing that it can be made a very valuable aid.

He handles also, as a side line, insurance. The same argument applies to some extent here as with the automobile agency; the implement man is calling on the farmer anyway and can very commently and ecomonically handle other lines that the farmer is interested in. Mr. Moore does not intend to push the insurance end of his business hard as time would not permit of this, but he expects to make it a profitable and useful side line.

CAR PRICES AT A GLANCE

No general reductions in the price of cars is anticipated for several months yet, according to statements obtained from leading manufacturers. In eighteen cases, among those noted below, prices are guaranteed for periods ranging from three to six months.

Cadillac.—No recent change in price. No guarantee

Chalmers.—No recent reduction. Present price guaranteed to June 30.

Chevrolet.—Prices unchanged. Guaranteed until July 1.

Cole.—Prices unchanged. Guaranteed to June 30.

Dodge.—Prices unchanged. No guarantee on prices, but no reduction anticipated.

Essex.—Price unchanged. Guaranteed to June 30.

Ford.—Prices unchanged. Guaranteed until August 1.

Franklin.—Price unchanged, No guarantee, but give assurance of price maintenance.

Grey-Dort.—Prices unchanged. Guaranteed to June 30.

McLaughlin-Buick.—Prices not changed recently. Present price guaranteed to June 30.

Hudson.—Price unchanged. Guaranteed to June 30.

Hupmobile.—Price unchanged. Guaranteed to July 31.

Liberty.—Prices unchanged. Guaranteed to June 30.

Marmon.—Prices unchanged. Guaranteed till September 1.

Maxwell.—Prices unchanged. Guaranteed to June 30.

Mitchell.—Prices unchanged. Guaranteed till June 30.

National.—Prices unchanged. No guarantee.

Overland.—Prices unchanged. Guaranteed to July 1.

Packard.—Only one price change, a drop of $50 on 3-25 7-pass. touring. No guarantee.

Paige.—Prices unchanged. Guaranteed to June 30.

Peerless.—Prices unchanged. No guarantee, but no drop expected.

Pierce-Arrow.—Prices unchanged. No information on guarantee.

Reo.—Prices unchanged. Guaranteed to June.

Saxon.—Prices unchanged. Guaranteed to June 30.

Studebaker. One model recently been reduced $100 and another raised $200.

Willys-Knight.—Touring car reduced $300 quite recently; other prices unchanged. Guaranteed to July 1.

Winton.—Prices unchanged. No guarantee.

Tractors Solve Alberta's Farm Problems

"Pee Dee" McLaren, Interviewed by Representative of Canadian Motor, Tractor and Implement Trade Journal, Talks of Distribution, Advertising, Prospects, Sales and Service.

"Stay With Your Tractor Prospect Until He Either Buys or Dies"

SO says P. D. McLaren, popularly known in the West as "Pee Dee," who ranks as one of the livest tractor salesmen and distributors in Canada. That is the epitome of his sales policy, though it must not be imagined that Mr. McLaren's association with his customer ends when the sale is made. In fact, once a prospect has become a customer, P. D. usually stays with him until he does die, giving the sort of service for which he has become famous.

Mr. McLaren has been associated with the tractor game since its inception in Western Canada, and some of his observations on building up sales organization, following up prospects, selling them and serving them, are sure to be of interest to dealers and distributors. When the writer asked Mr. McLaren what the biggest factor in his selling force was, he replied emphatically that advertising undoubtedly played the biggest part inasmuch as it built up his sales organization first of all and then brought the prospects to light. Possibly a brief summary of his ideas on advertising would be of value. He says:

"In lining up dealers it is necessary to use good daily papers to a certain extent, but it is essential to use the trade magazines, for they reach the dealer from a familiar angle, and he is usually more impressed with your message if it is carried to him by his own publication. Immediately after I have established my dealer connections, I proceed to advertise direct to the consumer and of course there is only one class of medium that can bring results—the straight farm journal. Some tractor people, I mean, distributors, think they can get value from other media, but they are not nearly commensurate with the farm papers. Even though the latter do have what seem to be unreasonable rates, they go straight to the farmer, and I know from experience that they are *read*. I have stayed at a good many farm houses at nights, and the first thing a farmer does after supper is to get out the latest issue of his favorite farm paper and read it through."

ADVERTISING in weekly newspapers, according to Mr. McLaren, is desirable from a local standpoint. It helps the dealer because it concentrates on his territory. Winter advertising of course, was considered the best from a consumer point of view, but if conditions do not allow winter advertising, Mr. McLaren's advice is to *advertise* anyhow.

Inquiries resulting from the farm paper advertising are handed over at once to the dealer in whatever territory they originate. Immediate action is advised, too, for the prospect is likely to have answered some other advertisement as well as yours, and the other fellow may be there first if you don't look alive. If any particular dealer is not considered strong enough to make the sale single-handed, Mr. McLaren sends out one of his best headquarters men to help. In actually making the sale Mr. McLaren believes first of all in having a strictly high-class tested machine that has shown by its performance that it can deliver the goods.

"A person can get enthusiastic without any effort if he has something of merit to sell," says "P. D."

Actual demonstration under all possible conditions is the best selling argument. Farmers have been largely exploited by manufacturers who carried on their field tests and experiences at the expense of the farmr. A machine should be ready to go ahead and give a reliable demonstration, and then stand up to it under working conditions. The average farmer will listen to reason, and is not hard to convince, but once he has been stung he is naturally wary.

Mr. McLaren believes the Western farmer is entirely sold on the tractor *idea*. Power farming solved the labor difficulties which arose during the war, and it doesn't take much talking to convince any of the skeptical. The main thing is the selling of your own individual machine. Evidence that farmers are sold on the tractor idea is found in the fact that they are sending their boys to tractor schools every winter. Another thing that has helped to establish power farming in Canada is the fact that thousands of farmers' sons who went to the front have become accustomed to automotive power in the performance of war duties, and will not be satisfied with horse-power methods of the days prior to 1914.

TAKING the prospect as soon as he answers an advertisement, he is fully indexed at the distributor's office, and his card is kept alive until a sale is made.

The matter of service is one of particular importance and a farmer should never be deserted merely because

P. D. McLAREN

he has been sold. It is Mr. McLaren's policy to send an expert with the machine when it is delivered, and he is instructed to remain on the job for three or four days, or as long as may be necessary to see that the machine is properly demonstrated under all conditions. Changes in the weather will require various carburetor adjustments. Altitudes also have varying effects on power, and farmers should know that at 4,000 feet a motor must be discounted approximately 9 per cent.

CONCERNING "PEE DEE"

P. D. McLaren was born in London, Ont. He went to Winnipeg in 1900 *for Fairbanks-Morse Co. of New York; travelled in Alberta for Fairbanks until re-organization of the Canadian business when it became known as Canadian Fairbanks-Morse; went to Alberta in* 1906 *and opened a Calgary branch for C.F.M.; manager there for six years. He started in the tractor business for himself in* 1912, *and is now president of the Well Tool and Iron Works, and distributor for Alberta for the Wheat tractor.*

Service, either gratis or paid for, should be given as long as the tractor lasts. Each dealer or distributor will have to draw his own line between the paid and the free service, but service in the common understanding of the term should always be given, thoroughly and quickly. As soon as a farmer intimates that he is in distress, Mr. McLaren puts a service automobile on the road without delay, and this car goes to any point within a radius of fifty miles. For trouble outside that area an expert is despatched by first train. In addition to his own men, Mr. McLaren has a factory supervisor whose duty will be to instruct local dealers and to be at their beck and call at any time. There should also be a central factory service station that would facilitate shipment of repair parts not ordinarily carried by the dealer. The Wheat tractor people have arranged such a factory centre at Regina.

ANOTHER feature of the service which Mr. McLaren renders is that of information. Farmers are very inquisitive as to all the details in connection with the machine they are operating, and it is a mistake to withhold information as to specifications of parts, such as shafts, bearings and other minor details not given in the general specifications. Buyers should also be instructed as to the principal parts such as the motor, clutch and transmission, ignition and fuel systems. Farmers should be taught that engineers are guided by actual field performance in the selection of these units, and that they know the necessity of considering local conditions in assembling them on any machine.

Seventy-five per cent. of all field trouble would be eliminated, Mr. McLaren says, if the farmer could be educated to a point where he would give his tractor half the attention he does his horses. The bugbear of all manufacturers and dealers and farmers is dust. This affects principally the motor. It is taken in through the carburetor and manifold directly into the cylinders, causing the rings to cut so that the motor loses compression and power. The oil washes the dirt down into the base of the engine, where it collects and causes further damage and trouble. If farmers could be persuaded to drain the oil from the crankcase every night and filter it, Mr. McLaren thinks that the majority of troubles would vanish, and the life of the machine would be increased 100 per cent.

The customer should be instructed on bearings too, so that he will demand a taper roller bearing on all points of the machine where the greatest wear would be. This type of bearing can be readily adjusted to suit the new condition after wear has occurred. Both dealer and farmer should know that there should be few, if any, bearings in a tractor of the old type of babbitt or brass bushing. Bearings have the same relation to a tractor that jewels have to a watch, and inferior bearings will cause a lot of unnecessary trouble.

MR. McLAREN has selected the Wheat tractor for distribution in Alberta. He attended the tractor show at Kansas City and was so deeply impressed with the merit of this machine that he decided to take it on. One of the features of the Wheat is that it will prove pretty much of an all year tractor in the West, for it has a set of rubber-tired wheels for road work, and can make 12 miles an hour on hauling jobs. This eliminates the five-month lay-up of the straight field and belt tractor. An expensive machine like a tractor should not be idle on a farm at any season of the year, and it was largely on this account, and the fact that the Wheat is equipped with Timkin Hyatt ball bearings throughout, that Mr. McLaren selected it.

With reference to tractor prospects for the future, Mr. McLaren is exceedingly optimistic. He believes the tractor industry is only started. Canada has shown a tremendous demand for smaller machines during the past year, and since the duty was taken off tractors costing under $1,400 the number imported into Canada has increased almost tenfold.

TRACTORS IN YORKSHIRE

During 1917 and 1918, motor tractors were introduced into Yorkshire, England, and in the North Riding nearly 200 were at work last year. Even though the use of the tractor on English farms is still in the experimental stage many good pieces of work were accomplished. One machine plowed 86 acres in one month, and in the harvest field the best achievement was in one district where, in one week, under certain favorable conditions as to weather, soil, size of crop, and competent handling, 85 acres were cut and bound. In other parts tree roots were stubbed up, whins cleared, grips filled, bushes removed, and the land generally prepared.

Know Your Customers—And Their Wants

By B. J. PAULSON, of Chicago, Tractor Expert

THE farm machine and implement business of today is no haphazard enterprise. The achievement of success involves a judicious application of advertising, cost accounting, the right selection of an agency, a proper working knowledge of the machines and implements handled and a keen knowledge of one's customers and their requirements. The latter is the real foundation of success in the implement business.

Without a knowledge of his customers and their needs, the agent is only beating about the bush—spending time, energy and money and getting nowhere. He must be somewhat of a student of human nature, must have a retentive memory and should cultivate his powers of observation. He should know his customers' needs, even down to some of the small, helpful details overlooked by the average implement man. He should take advantage of every opportunity for cementing the bond of goodwill that exists in every successful enterprise. To illustrate: An implement agent sells a farmer a mower; a year later the purchaser possibly drops in to buy a disk harrow. After closing the harrow sale, a conversation something like this might ensue:

"How's the mower you bought last spring, Charlie? The last trip I made out to your place it needed a new pitman bushing and a few sickle sections. Better get it fixed up now while you have time. You will want to use that mower in about six weeks."

"Plenty of time, Frank—no hurry."

"That's just it, Charlie—there is no hurry right now, but if you are going to put it off until the last minute, you will be in such a big rush that you won't take time to do any fixing—or if you do, your crop is liable to suffer, and if you don't, the mower is going to suffer. Better be prepared to cut your hay while the haying is good. If you would take time to go over your mower now, all of your farm machinery in fact, and put your equipment in shape for work, it would last you just twice as long as it would otherwise."

A Good Binder, Yet

"NOW that you put it that way, I guess you are right, Frank. I'll look over my outfit as soon as I get home and make up an order of what I need. I don't hardly think it's worth while to fix up the old binder, though."

"Charlie, that binder ought to be good for two or three seasons yet—I sold it to you and I know. You make up a list of parts required to put it in first-class condition and you will find that it'll prove a whole lot cheaper than buying a new binder. Or better still, Charlie, wait a few days until I get out to your place. I'm going to make a little inspection trip out in the country next week and visit all my customers—look over their equipment and see how much money we can save them by fixing up the old machines. There is no sense in buying a new machine when a few cents or dollars spent on the old one will serve your purpose just as well."

"Seems to me you are cheating yourself out of a lot of sales, Frank, by helping us fix up the old machines when we are willing to buy new ones."

"Not at all, not at all. To the contrary, it's just the other way round. You, for instance, have been buying all of your machinery from me for the past ten years—why?"

"Come to think of it, I guess that's so—and the reason is probably because you always sold me good machines and helped me out in the selection of implements that would save me time and money. For instance, I consider that tractor you sold me last spring the best farm machine investment I have ever made. With the boy over in France, I would have been right up against it without that tractor. But as it turned out, I managed to put in a bigger crop than ever before. I don't hesitate to come in and ask your advice, Frank, about any new machine, because I know you won't sell it to me unless I can use it to good advantage. And when I need a new machine, I know you will tell me so honestly.

"But that fellow Bilkins across the road—he is just the opposite. He'd sell a fellow all the machines in his warehouse if he could make it stick. I know of one or two homesteaders that he's busted up in business through over-selling them—and now I hear that Bilkins is ready to bust up. But you seem to be prospering, Frank, although you didn't have as much to start with as this fellow Bilkins. It must be because you help us save money so that we have more money with which to buy implements and can pay cash for what we get."

Tractor pulling a grain binder. "Every labor-saving machine suitable to the farmer's requirements will not only pay for itself, but will increase the purchaser's buying power."

They Prosper Together

THAT'S the whole thing in a nut-shell—as the farmer prospers the honest, helpful agent will prosper also. By aiding the farmer in the selection of implements best adapted for his particular locality and by bringing to the attention of the farmer each and every labor saving machine that he can use to good advantage, the agent is laying a permanent foundation for success.

The agent must convince his patrons that success in farming is not attained by getting along with as few implements as possible any more than progress is made in manufacture by attempting to get along without necessary equipment. Every labor-saving machine suitable to the farmer's requirements will not only pay for itself, but will increase the purchaser's buying power. It is to the agent's interest to aid the farmer in equipment economies, such as keeping his machines in good operating condition, and it is also greatly to his interest to help the farmer guard against false economies such as inadequate equipment.

Having in mind the needs of his trade, the next step is the matter of selecting a line of machines and implements that will best supply them. While there are a number of very meritorious lines from which to make a selection, the agent must use good judgment. For instance, a "mixed line" is not as profitable as a "full line." If the agent contracts with several concerns, for implements that he can secure from one concern, his overhead and selling expense will be greater.

On a mixed line it frequently happens that he cannot make up car lot orders, whereas he would experience no difficulty in doing so in the case of a full line representation, thereby effecting a considerable saving in freight in the latter case. The mixed line also involves a greater expenditure of time with field and sales representatives of each concern represented, and when separate shipments of machines arrive more time and labor is consumed in unloading and getting them to the warehouse than in the case of car lot shipments from a full line concern.

Service All The Time

ANOTHER thing of great importance to bear in mind in the selection of an agency is the matter of service. If the manufacturer is located at a distant point and does not maintain branch houses or distributing warehouses in the territory covered, the agent will suffer in proportion to the extent that his patrons suffer on account of expensive delays waiting for repair parts or emergency shipments of machines, in case the agent's stock becomes exhausted. In the latter event, long shipments also mean prohibitive freight. During his busy season, such as harvest, the farmer should be able to secure any part which he may be in need of within a few hours after phoning his order to the local agent instead of a matter of several days or weeks. The latter, however, is often the case when the agent has overlooked the little item of "service" in the selection of his agencies.

During the past few years another big factor has also entered the implement agent's selling field—advertising. And the importance of advertising in this branch of commercial activity is increasing every day. The many lines of high-grade farm machines and implements now on the market have naturally resulted in been competition, and advertising is one of the best known antidotes for competition.

It is true that the average implement agent knows little about advertising. However, present day manufacturers' selling methods have relieved him of this responsibility. He can now secure the highest form of advertising—personal, individual service over his own name—at practically no cost to himself. The leading farm implement concerns maintain extensive advertising departments for the benefit of their dealers and agents. Here, co-operating with the sales departments, talented advertising experts and commercial artists devote their time to the preparation of catalogs, folders, sales letters, newspaper advertisements, complete campaigns, in fact, including every form of advertising, all of which may be had by the agent merely through a little friendly co-operation on his part.

Don't Sit Tight

THE agents who are taking advantage of this advertising help—sales aids far beyond their individual capabilities or resources, as a rule—are meeting with the success that always goes hand in hand with properly applied progressive methods. It is necessary that the agent make some noise about the machines and implements he handles, lets his patrons know the time and labor-saving machines that they need and which he can supply. The fellow who just sits tight, says nothing and regards advertising as a liability instead of an asset, will not get far on the road to success in the implement business under present conditions.

This tractor is pulling three loaded wagons of farm produce to market. "As the farmer prospers, the honest, helpful agent will prosper also."

The Dominion Bureau of Statistics has issued a preliminary report showing that the value of motor car production and repair works, including accessories, for the past year was $66,053,207. Of this amount $54,466,273 covered automobiles; $6,495,868 accessories; and $5,091,066, repairs.

CANADIAN
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TRADE JOURNAL

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MOTOR SHOW IN P.E.I.

WE are plased to note that Prince Edward Island has held a most successful automobile show—March 19 and 20 were the dates. Nearly a dozen different makes of cars were exhibited—which is pretty fair for a province which until three or four years ago discouraged the bringing of cars to the Island. The show was held at Charlottetown, and indications are that from now on the residents of P.E.I. will be vigorous boosters for the automobile industry.

'PLANES AS A SIDE LINE

Good morning! Have you taken on a "side line" of aeroplanes yet?

No? Well, it's coming, sure as fate. It may not be a regular line with motor and tractor dealers this year—or next—but it's bound to come within this decade.

We were discussing this question a few days ago with a dealer in Eastern Ontario.

"You wouldn't carry aeroplanes as a 'side line,' would you?"

"Sure, I would; I'm ready for an agency any time. I'm strong for the aeroplane as a commercial proposition, and am very optimistic as to its future."

A farmer in Saskatchewan, George Kounkel, bought an aeroplane last month for $5,000. Mr. Kounkel already owns a flock of three motor cars, and has a big line of power machinery on his farm, which is one of the show places of Aylesbury district.

"Aeroplane and automobile repairs"—this sign may be seen over a garage in Teraulay street, south of College street, Toronto. How many others are there prepared to handle such business? Quite a number, we venture to say, especially as a large number of former air mechanics, as well as pilots, from the Royal Air Force, are going into the auto repair business in this country.

Toronto now has its first aerial taxi—a former instructor in the R. A. F., Lieut. Le Roy Holmes, is advertising that he will teach pupils to fly, or will take passengers for a quarter-hour "flip" for $15.00.

TRACTOR STANDARDIZATION

At the recent Kansas City Tractor Convention, which was fully reported in our issue last month, there were eighty-three types of tractors shown. This number is astonishingly large for an industry in its infancy. It has been suggested that a movement toward standardization of types should be initiated, but any such movement might easily be overdone. Most of these eighty-three types are in the field to stay, and any type of machine which proves reliable, and does the work for which it is sold, merits a place in the tractor trade. Tractors have to meet diverse conditions, and diverse types will be required. In a tough, heavy soil, such as we find in York and Peel Counties, a slow-moving, heavily-built plowing outfit will do the best work. In lighter soils, such as Norfolk county is noted for, a lighter, speedier outfit may prove more satisfactory.

When taking on a tractor agency, implement and automobile dealers should study carefully the agricultural conditions in their neighborhood. Get the agency for a tractor which suits the work to be done by farmers who are your prospects.

The variety of types of tractors will be affected, also, by the personal preferences of farmers. Some want a tractor which will do satisfactory work with the minimum amount of attention; others, who pride themselves on an extensive mechanical ability, will prefer a machine which they can adjust to wider ranges of conditions, and one possessing more flexibility than can be obtained with simpler machines.

ATTRACTIONS FOR MOTORISTS

No longer will automobile tourists in England detour to avoid bad roads; instead they will hunt them out. At least it is supposed that they will do that since Guildford Urban district has employed girls for road repairing and cleaning. The land army girls have been given the jobs pecause their muscles were developed for such work by pitching hay and hoeing and the like for the past two years. The girls earn about ten cents per hour and are proving very successful workers.

I'LL GO TO BILL SMITH'S GARAGE. HE STOCKS UP EARLY
I DONT CARE WHAT IT COSTS, I WANT A TIRE
HOW CAN I RUN WITH A CRACKED SPARK PLUG.
A PEACH OF A DAY, AND NO BRAKE LINING
SPRING IS EARLIER THAN USUAL AND THE EXPRESS CO'S AT FAULT. THE WHOLESALER ISN'T TREATING ME RIGHT, AND I FORGOT ABOUT THOSE PLUGS.

Are you an early bird?
—By Racey, in "Auto Links"

A FEW OF OUR BOUQUETS

Gentlemen:

The writer and Mr. Heiskell have both looked through the first issue of your publication and take this opportunity to compliment you upon the editorial contents and typographical appearance of the same.

We see no reason why your paper should not meet with the approval of the Canadian implement dealers.

Kindly keep the writer advised as to any developments.

Very truly yours,
International Harvester Company of Canada, Ltd.
By John M. Shumway.

* * *

Gentlemen:

The first issue of the *Canadian Motor, Tractor and Implement Journal* has reached me and I have gone over same very carefully and must say it is indeed very good.

Enclosed you will find $1.00 for which please enter my name on your mailing list, and if there is anything at any time that I can do to assist you in your new work be sure to call on me.

W. J. Allin,
Chatham, Ont.

* * *

Gentlemen:

We recently received a sample copy of *Canadian Motor, Tractor* and *Implement Trade Journal* and are very favorably impressed with it.

Emerson-Brantingham Implt. Co.
Per H. E. Grebe, Mgr.

* * *

Gentlemen:

The first copy of this *Journal* has come to our attention, and you certainly have done a very good job for a starter. No doubt you are looking forward to a very much better paper at an early date. We wish you every success, and if there is any thing that we can do for you, please let us know.

The Canadian Fairbanks-Morse Co., Limited,
E. A. Adams.
Advertising Manager.

SERVICE AND KNOWLEDGE

There are two things on which the success or failure of the tractor business depends:

1.—Service, and

2.—Knowledge of the farm business.

For service the tractor owner must still go to the automobile repair shop in a large number of communities. This is one of the reasons why some of the tractor makers seek alliance with the motor car man. Another reason is that the motor car man, if given a territory of any size, will buy tractors and pay cash and relieve the tractor maker of all responsibility.

In some instances motor car men, with their expert mechanical knowledge and ability to give service, have combined with the implement man and have formed a business handling everything in the line of farm machinery, from hay rakes to motor cars.

In the case of the motor man who is going into tractors, fine salesmen have been found in many instances by securing an implement man as salesman. This effectively hooks up farm knowledge with the service end. It has been found that there are hundreds of dealers throughout Canada, especially in Ontario and the prairie provinces, who have a thorough grounding in all matters appertaining to the farm, and qualified to look at tractor problems from the farmer's view-point. This is essential: get your prospect's view-point; don't be blinded by your own.

DON'T BLAME THE TRACTOR

Experience with other forms of machines, such as stationary engines and automobiles, goes a long way to qualify a person to run a tractor. But, the evidence of practical men—manufacturers, dealers and power farmers—proves that it is not adequate experience, and anyone who expects to either sell or run a tractor should first become thoroughly familiar with it. We know of one of the most successful automobile salesmen in Canada who has reecntly taken on a line of light farm tractors. He is preparing, in a few days, to take one of these tractors out into a field, and stay with it until he knows all its ins and outs—so that he will be equipped to answer any question a farmer-prospect can ask him. *He is going to wrestle with that tractor until he masters it!*

Many a good tractor has been called "no good" when the trouble rests with the operator and not with the tractor. From every point of view the better equipped the dealer, and the better educated he is in every way, not only to sell tractors but all farm equipment, the better he will be equipped to advance the industry and the Dominion's prosperity.

INSURANCE ON THE SIDE

Is insurance a good side-line for an implement and tractor dealer, or an automobile and accessory agent to handle?

An automobile agent located in a Central Ontario town, which is noted for being an exceptionally "live" one, says that he finds it a very profitable business to carry insurance business to fill in the dull season. Many an evening, he says, clients have dropped into his office, or he has dropped into theirs, and he found it very easy to put a good insurance proposition before them. On the other hand, another agent says that he would not be bothered with insurance.

We wonder just exactly what has been the experience of most agents in this field.

AN ESSENTIAL FACTOR

The progressive implement dealer is recognized in all Canadian communities as an essential trade factor. An authority on the question of the dealer's connection with power farming says: "The experienced farm equipment dealer who takes on motor farming lines and develops the trade to the extent of his ability, at the same time continuing all warranted efforts for the sale of horse-drawn and other ordinary farm equipment, has an opportunity to build up a trade which in volume and gain may go far beyond his fondest hopes. That there is a big and increasingly important place for the dealer who handles the entire assortment in a progressive way is a proposition beyond controversy."

MANY THANKS, VAN!

P. G. Vanvleet, editor of the *Canadian Implement and Vehicle Trade*, Toronto, in the March issue, has words of welcome for the advent of the *Canadian Motor, Tractor* and *Implement Trade Journal*. This welcome is appreciated, as coming from one of the pioneers in this field of endeavor.

Caterpillar Pulls the Bird out of a Hole

By J. VERNON McKENZIE

Author of "Raiding the Rhineland," "Bombing the Boche," etc.

Handley-Page, stuck in mud, pulled out by tractor.

There are about twenty men lifting the tail, and giving the tractor their aid. The man walking behind and bossing the job is a Flight Sergeant. Sometimes they work, too. Note how the giant bomber is stuck up to the hubs.

TRACTORS and aeroplanes seem about as far apart as the Poles. One naturally would expect to see a tank take unto itself wings and float gently upwards, wafted on the zephyrs toward the clouds, as to imagine that an aeroplane and a tractor could be hitched together for any useful purpose. Yet tractors did yeoman service in France during the recent unpleasantness, particularly during the fall and spring months, for many a giant Handley-Page was yanked out of the mud by our lowly friend with the caterpillar treads.

There were some weeks last fall, shortly before the signing of the armistice, when it would have been impossible to carry on one-half the number of raids nightly taking place over Hun territory if it had not been for the tractor's aid. The aerodromes were occasionally ankle-deep, at least, in mud, and as soon as the huge Handleys were wheeled off the Tarmac they were liable to become stuck in a gluey, goo-ey substance, just as adhesive and as clinging as any to be found in France or Flanders.

Three night-bombing squadrons were located at an aerodrome near the village of Xaffevillers, a few miles south of Nancy, each squadron being equipped with ten or a dozen of the huge Handley-Page machines—each of which measures ninety-eight feet from wing tip to wing tip, and more than seventy feet from nose to tail. They usually were equipped with two 250 Rolls-Royce engines, and stood high enough so that one could have stepped from the top wing into the third storey of a house.

The word would come through from Wing headquarters that the night's objectives would be Saarbrücken, the Boulay aerodrome, Mannheim and Cologne. About two o'clock in the afternoon the mechanics would commence to fill the gasoline tanks, overhaul the engines, inspect the rigging and gadgets, and "run up" the engines, to see that all was in shape to go smoothly. For they knew that, should anything go amiss, if the engines should "conk," for example, the pilot and his crew would be likely to sleep that night in Hunland.

ABOUT four o'clock the pilot and observers would come out to each machine, take a look over it finally, and then stroll back to the mess, for what might be, for all they knew, their last meal, and later to don their warm togs. At this time of the year dusk comes on about five o'clock, and the orders were that every machine was to hold itself in readiness to "take off" at a quarter to five.

About twenty minutes to the hour the pilot and his two observers would climb up the ladders into their respective places in the big 'bus, and would be ready for the night's "show." It would not be quite dark yet, but the lights of other machines, each loaded with its ton or so of bombs, could be seen blinking and winking all around the fringe of the aerodrome. For the hangars of an active service squadron are located, if at all feasible, at the edge of a wood, as this makes observation from the air very difficult, and at a height of more than a mile practically impossible.

One very "sticky" night, after almost twenty hours of rain, six machines in my squadron were detailed for duty. Rain had cleared off during the afternoon, and a west wind had blown away the clouds, giving promise of a fairly clear night. The Tarmac extended but a short distance from each hangar, and though an attempt had been made to pick hard and fairly dry spots to rest each machine as it stood ready for the take-off, five out of the six were sunk, almost to their hubs, in the mud.

The signal was flashed from the central control tower for the first machine to get away. This happened to be the one whose wheels had run on to a patch of the ground covered with ashes and cinders, and so it was comparatively easy for it to get a start. The wind this night was blowing *away* from the hangars, so that meant each machine had to "taxi" about two hundred yards, almost to the other side of the 'drome, in order to take off *into* the wind.

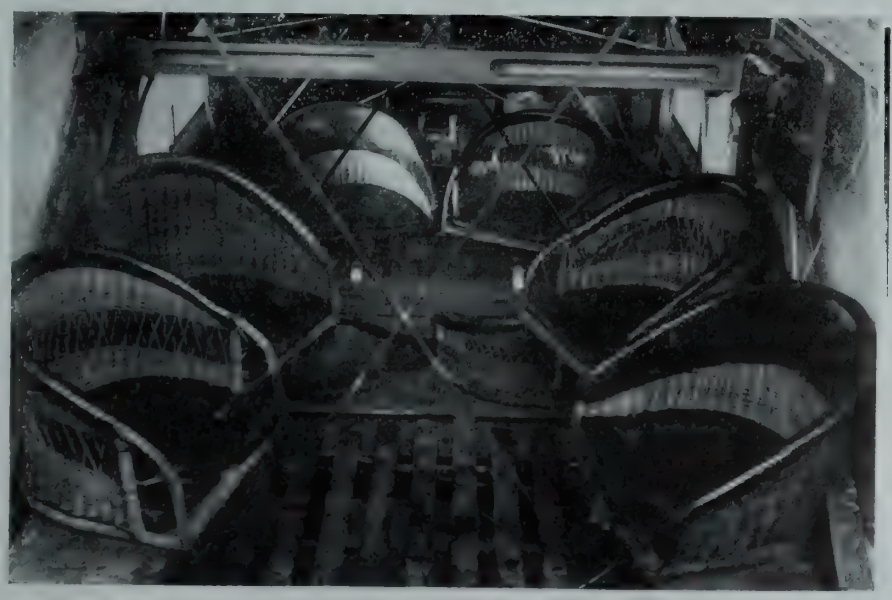
NO. 1 machine got away to a quick start, and went bump-bump-bump over the uneven ground to the starting place. There it turned around, ran the engines up to top speed, and less than a minute later was humming right over our heads, winging its way toward Cologne.

"No. 2 get away," flashed the signal.

This sturdy old 'bus, which carried one 550-pounder and eight 112's for Mannheim, winked its signal light in reply:

"O. K."

The propellers during the last fifteen or twenty minutes had been slowly revolving, just enough to keep the engines warmed up. Now their speed was gradually increased—700—800—1,000—1,200, until top speed, 1,700, was registered. But the machine didn't move!



Mr. Bonar Law used this machine on many trips to Paris. Our photograph shows the interior of a Handley-Page, once a bomber, now fitted up to carry twenty passengers. Pretty comfortable, what?

The wheels were fast embedded in the mud, and the heavy tail of the H. P. was, under the circumstances, too much for the power of the engines. The pilot leaned 'way over the side of his cock-pit, peered anxiously into the darkness to see how the old 'bus was stuck, and decided it was "no go." So the Flight Sergeant was signalled for, and with a dozen or twenty men in his party he ran out to the machine.

The men got under the tail, half the party on each side, and lifted and pushed for all they were worth. Again the engines were run up to their capacity, the whole structure creaked under the strain, but didn't budge an inch!

A hurry call was sent for the tractor, and a mighty small object it seemed for its task, too, when it lumbered into view through the gathering gloom. It was equipped with caterpillar treads, and looked like one of the Holts from Illinois. But as we had had reason to know, it could tackle the job and put it across in an efficient manner.

THE tractor's "chauffeur" backed up before the huge aeroplane, and mechanics hitched a logging chain around the axle bar of the Handley and attached this also to the tractor.

"All right! Go ahead!" shouted the Flight Sergeant.

The "choog-choog-choog-choog" of the tractor could be heard, even above the roar of the engines — which were also "pulling" to their utmost—and in less than a minute the night-bomber's wheels would emerge, inch by inch, from the mud, and, as it got free, the engines would have to be throttled down to keep it from running over the tractor. But the job was done, the chain would be quickly unhitched, and before the wheels had a chance to settle again the bomber would be on its way to the starting place.

Two other machines were next given similar aid, mechanics running around with lanterns to hitch and unhitch the tractor, and give useful assistance in other ways. Only two more machines to get away, and those on duty—but not on a "show"—would be able to get back to the mess.

But what's that signal?

A green and red rocket shot into the air. The "fizzzzzzzzz" of its ascent could be heard before the burst, and every one within range looked upward to observe its color.

Green and red! "Huns overhead!"

Such was the signal's meaning, and almost on the instant the bursts of the anti-aircraft guns corroborated this. The raiders had still to "carry on"—but the remaining machines were to follow orders previously given for such an emergency, and were to "take off" *without* lights. This isn't the easiest thing to do, especially as it was now after six o'clock, and since the moon was not due to rise for a couple of hours it was impossible to see a man more than fifteen feet away, even dimly.

THE tractor hitched on to the next but last machine, and in the pitch darkness "carried on" as before, but the black night enhanced the difficulties. This next machine came out of the mud with a sudden rush that almost ended in a collision between tractor and aeroplane. Just then the "Flare Officer"—the orderly officer for the night—ran over to the Flight Sergeant and said:

"Has number four got off yet?"

"She got away from here, sir; didn't she take off from the centre of the 'drome?"

"I don't think so; I believe she's stuck in the mud out there."

An orderly was sent off at the double to see what was wrong, as no searchlights could now be used, and number 4, even if stuck, would not under the circumstances be able to show signal lights. For the Huns had not yet located this aerodrome, and it was not intended that they should do so, if common-sense precautions could continue this state of very welcome obscurity.

Panting, the orderly came back, and gasped;

"She's stuck, sir! Right up to 'er haxles! Capt. Gilbert, sir, wants the tractor quick!"

The tractor and its pilot were started off toward the centre of the field, and found number 4 in a regular quagmire. A few minutes' effort, however, and the machine was pulled clear. Every person worked at top-speed with a feverishness of effort resulting from the fact that the centre of an aerodrome is not the most healthy place in the world with Hun bombers roaming around above, probably 10,000 feet up. An occasional fragment of shrapnel dropping back, spent, and plunking into the nearby mud, emphasized this.

Then, back came the tractor, and in a few minutes had pulled out the sixth, and last, machine. By this time it was after seven o'clock, but all the night-birds had been speeded on their way. The "Archie" battery had quieted down, the last "woof, woof" of its shells had been heard, and the tractor was trundled back to the corner of a hangar.

TOWARD the end of the war the tractor was used regularly in England to pull the super-Handleys, and in some places the old Handleys, out of their hangars to the take-off positions. The Handley-Page was the first land machine constructed so that the wings would fold back on hinges, and extend back along the fusellage. This economized space to a tremendous extent, as the H.-P. could thus be accommodated in less than half the space it would have occupied with its wings outstretched. The Shortt sea-plane is believed to have been the first aircraft of any description to make use of this space-saving device.

The super-Handley, which was built especially to raid Berlin, is equipped with four engines, a number of them having two Rolls-Royce and two Liberty engines, with an aggregate horse power of more than 1,000. When the super-Handley was completed it was readily seen that a tractor would have a permanent place in the equipment hereafter of any aerodrome, as this mammoth was too huge to be wheeled around in the usual fashion by man-power, except where the ground was very flat and hard. The aid of the tractor was requisitioned, and it "made good" in the theatre of war as emphatically as it proved its value in an essentially different sphere, on Canadian farms.

Frank Sparrow's White Elephant

The People of Arnprior thought the Garage was too Big for the Town—But the Owner Knew Better

By SCOTT I. DUTHIE

Give good service — Advertise — Work like blazes

THESE are the three golden arrows which point the way toward success in the automobile, accessories and tractor business, according to Frank Sparrow, of Arnprior, one of Eastern Ontario's livest dealers. Incidentally, it may be remarked that these rules might advantageously be followed in a good many other lines of business.

There was a time—and not more than half a dozen years ago—when Ottawa Valley citizens who wanted to buy cars went to Ottawa, or occasionally to Montreal, to purchase them. When they already owned cars and needed some repairing done, they usually got this work done in Ottawa, too.

This was the situation when, one day in the spring of 1913, the citizens of Arnprior noticed the commencement of a new brick garage. It was sixty feet long and thirty feet wide, with comfortable room for ten cars. Most of those who watched the structure as it neared completion, went away shaking their heads—too big for this town, was the general thought.

Just about this time a well-known business man dropped into Arnprior on a visit and looked over the now completed garage.

"Too big," he said. "Away too big; it'll be a regular white elephant on your hands."

So, from that day, it became known as "Frank Sparrow's White Elephant," and as such took its place on the list of stock subjects which furnished material for the gibes of local humorists. Mr. Sparrow sat tight, smiled his quiet smile, and "sawed wood."

He got a first-class line of cars, to which he added a sister line, a less expensive car, in 1917. Plenty of cars were kept in stock, and Arnpriorites were given no excuse for going further afield to procure what they wanted.

A good mechanic was obtained, and coached and trained until he was second to none, even to Ottawa. Repairs were promptly executed, and fair and moderate charges made. Gas, oil and tires were always ready for instant sale when wanted—there was never any delay. A well-selected initial stock of spare parts and standard accessories was bought and kept up-to-date in this fashion: Whenever a part was called for, and sold, a duplicate order was immediately sent to the manufacturer for this same article. By this system of duplicate orders there was no chance that the stock would go shy of any one part.

How much free service should an owner get after buying a car?

This is a question that has vexed and perplexed many a dealer. Mr. Sparrow decided that about one hour would be just and square for both parties concerned. People don't appreciate something for nothing, Mr. Sparrow believes, and if an owner needed further service he was charged for it.

FOR a while a few men still went to Ottawa to obtain repairs and have their cars overhauled, but they discovered that the work certainly was no better done, and cost rather more, than if they had patronized their home industry. So they tried Sparrow's garage, and were satisfied with the service obtained there.

Advertisements were judiciously placed in the local press, and the surrounding country was efficiently circularized. In addition, the proprietor himself did his best to fulfil the precept, "Work like blazes," and what was the result?

By 1917 he could have used to advantage four times the space of the 1913 "White Elephant." Long before the "White Elephant" had died a natural death, "gone west" without a struggle.

This year a new garage is being built in Arnprior —and it will be seventy by one hundred and twenty-five feet. It will be designed to hold nearly 100 cars —and there's no one in the town who remarks that it may be a "white elephant!"

Manufacturers and dealers have only themselves to blame, says Mr. Sparrow, for the fact that farmers still desire "time" in their purchases. It is up to the automobile and tractor man to educate them out of their life-long habit. Of course, the implement dealer is also doing all that he can to change this policy, but it is more difficult, always, to eradicate an old habit than to prevent the formation of a new one.

To show how deeply it has been ingrained in the average farmer that he can hope to get implements on time, and even procrastinate in buying them, Mr. Sparrow tells an interesting story of a dealer in Brockville.

This dealer had a prospect on his list who needed a new drill. He drove out to the man's farm and said:

"Well, Sam, I see that old drill of yours is so rusty and bent that you can't use it. I've got a drill at my place that'll just suit you."

"How much is it? How long would you give me to pay up?"

"It'll cost you $110; I'll have it out here as soon as you can write out a cheque for it. We can arrange the 'time'."

THE dealer and the farmer talked over this and other matters for an hour or more, but came to no decision. The farmer agreed that he needed the drill, and admitted that his old one was worthless. But he just couldn't see his "way clear to spending so much money."

The very next day an automobile salesman went out and saw Mr. Farmer, and sold him a car for $1,500 cash!

Another experience is worth telling, showing how an observant man may take advantage of his experiences to profit financially thereby. Opportunity sometimes knocks more than once, but there are often long intervals between the knocks. Mr. Sparrow is not now handling implements, but carries pianos as one of his lines. He tells how he changed, in this way:

"A few years ago I went out to a farmer, who was a prospect for a certain implement, and after quite a talk I had him lined up to buy it, and my profit was $17. Before I got away from his place another chap came along and sold the farmer a piano. His profit on the deal was $100. I decided right then and there that pianos were a good side-line to handle."

Since then, in order to devote his attention more specifically to motor cars, tractors, and musical instruments, Mr. Sparrow has discontinued his line of farm implements. Not because it's not a good business, with plenty of scope for expansion and money-making, but because he, himself, is more interested in the other branches.

A LINE of face cream in the window rather caught the eye of visitors.

"What does a dealer in your lines carry face cream for?" he was asked.

He explained that women come in the store to look over the pianos, to listen to the latest records on the gramophone, and to glance over the sheet music. And the face cream is carried to oblige them. It is a distinct feature of "service."

It is found by this dealer that the music instrument end of the business almost runs itself now, with a girl to take charge, and the motor car, tractor, and accessories ends of the proposition are almost completely divorced from the rest. Practically two distinct businesses, but under the same head, and with many criss-crossing wires.

A very neat and businesslike cabinet, pigeonholed, for accessories is prominently placed in view.

Service on tractors will be given to Mr. Sparrow's customers by a practical tractor mechanic who knows his job. They'll be charged for what's done for them, and an attempt will be made to teach the farmers how to handle tractors themselves, and use their own common sense to extricate themselves from the ordinary routine difficulties encountered.

When should a purchaser be in the most tractable mood for purchasing accessories? Mr. Sparrow was asked.

"When he buys his car. That's the best time to sell him what he should have. A car-buyer, say, of a Chevrolet, should buy at least $50 worth of accessories. He needs them, and a dealer who is on to his job will sell them to him."

When buying, get standard accessories. Don't invest in every new-fangled "contraption" that is put on the market, concludes Mr. Sparrow. By careful buying of standard accessories, "dead" stock can be kept down to a minimum, and nothing except saleable goods will be stocked. Overhaul the stock frequently, especially in the spring, and the trouble will be found well worth while.

FARMER JOHN ASKS:

Q.—Can I run a tractor?

A.—Most anyone who has received instructions in operating a machine or who will take particular care to study directions and the tractor itself can ordinarily operate one. Naturally it is of great assistance if one is mechanically inclined, but beginner's instruction should be a part of the purchase of a tractor. More satisfactory work will be performed, the repair bill and costly delays will be partly eliminated—the operator will more surely become a booster rather than a dissatisfied knocker.

Your Customer—A Knocker or a Booster?

By H. L. SOUTHALL

"Don't Make Extravagant Claims," is Slogan of Manitoba Firm.

"IF your line of implements or tractor does not live up to its advance notices, your customer will become a knocker. Better to underestimate the value and capabilities of the line and let the farmer find out he has more for his money than he thought he was buying, for each customer then becomes a booster."

These words sum up the business attitude of one of the oldest implement firms in Manitoba, whose success is well known throught the prairie Provinces.

Smith and Thompson is the partnership to which we refer and the firm is located at Minnedosa, Man., with a branch at Bethany, Man. C. R. Smith has been located in this district for thirty years and though for the last twenty years engaged in the implement business, he has still considerable farming interests. The best illustration of the lapse of time since this business was commenced is found in Mr. Smith's casual remarks concerning present day prices compared with those prevailing when he commenced business. Oats were then selling at eight cents a bushel; butter was ten cents a pound and eggs—such trifles were being fed to the dogs.

Look at the cars in Minnedosa, a town of 1,900, and a live one—quite a bunch, eh? And these are only a fraction of the cars Minnedosa dealers are selling to the town and surrounding territory. The picture on the right shows a few of the soldiers who left this district and are returning to spend on implements the money loaned them by the Government for this purpose.

Times have undoubtedly changed, but Mr. Smith and his present business partner, Mr. Thompson, agree that the motto "Don't Make Extravagant Claims" applies equally to business to-day as at any time during their career. Their partnership was formed only a few years ago, Mr. Thompson being a graduate of Wesley College, Winnipeg.

Minnedosa is located in the centre of a highly prosperous district, where crops have been good for some years, and Smith and Thompson have taken full advantage of the opportunity to prove to the farmer that he can spend some of his surplus profits advantageously in labor-saving implements. The result has been to increase their volume of business considerably, resulting in the sale of twelve tractors during the season of 1918 and an even better outlook for the coming season. The branch warehouse opened at Bethany, Man., some three years ago, helps greatly to speed up distribution.

Returning to our initial claim that much of the success of this partnership is attributed to the business motto concerning extravagant claims, we will here give some practical illustration of what is meant thereby. The particular tractor handled in this case is rated at 20 horse-power. This is all that is claimed by Smith and Thompson in selling a machine, though in reality the tractor has been tested to as high as twenty-seven horse-power. The claim is made that the tractor will plow ten acres a day and on fifty cents' worth of fuel and oil. Under test the machine has ploughed sixteen acres in a day.

The difference between these calculations is to some extent due to the variation of soil conditions but there is also much room for exaggeration.

One Year's Service Free

WHILE contending that a tractor is an undoubted asset of great value to a farmer, Smith and Thompson make no attempt to sell a machine to a farmer whose farm is hilly and broken to such an extent that a tractor would be not only difficult to operate, but would render the use of a machine a dangerous occupation. While contending that a tractor will do the work of ten or twelve horses in pulling binders, etc., it is pointed out that the tractor will not eliminate the necessity of the employment of horses, but that better work and more work is done where horses are used in conjunction with a tractor.

A good talking point is made of the fact that parts and repair work are provided free of cost to the farmer during the first year his machine is in operation, but there is no hesitancy in telling the customer before he buys that should the machine be severely damaged as a result of the farmer's own negligence in operation, he will have to pay for skilled mechanics to make repairs.

While there is strong competition in Minnedosa and district, in the matter of selling tractors, Smith and Thompson have found that talking price and service, backed up by the reputation they have achieved for "delivering the goods," wins for them many orders and permanent customers. An important phase of the service rendered is in the supplying of parts for repairs. A line of bearings and some other small parts of tractors and implements is kept in stock, while a complete line of repairs is available in Brandon, Man., and can be secured on short order. In this respect some agents representing manufacturers of tractors are badly handicapped, notably those located in the United States and who have no distribution centre in Canada. Delay in securing repair parts is obviously a serious matter to a farmer in harvest season.

THOUGH crops have been good and the farmers' bank accounts have been growing rapidly, the tiller of the soil is still found to be as hard to separate from his money as in days gone by. Smith and Thompson find that active solicitation is necessary, especially in championing the cause of new devices, such as motor tractors. In this connection it is interesting to note that in their case a tractor of compact construction, capable of developing fairly high power and yet being easy to operate, best meets the requirements of the district. They have found that a machine which develops twenty horse-power on the belt and ten horse-power on the drawbar is best suited to the needs of local farmers. A machine of this type will keep five stook teams busy, will pull an 18-inch brush-breaking plow, will travel 2½ miles an hour and pull three 14-inch plows at from 6 to 8-inch depth.

Fuel consumption is a big item, and in this respect a tractor which will plow ten acres a day at a cost of fifty cents for fuel and oil, appears to be most popular. Of course kerosene for fuel is not only cheaper than gasoline but is claimed to develop greater power. The old objection to using kerosene as fuel, based on the fact that the kerosene often escaped past the pistons and interfered with the lubrication system by rendering the lubricating oil practically useless, has been provided for, on up-to-date machines.

The chain drive has been found to be a popular feature of some tractors, as compared with the gear drive. One important reason is that the replacing of a link in a chain is a small job compared to the replacement of a gear. A self-steering device is also said to be popular with farmers. This device steers the tractor automatically while ploughing, using a completed furrow for a guide.

Soldiers Going on the Land

WHILE the number of returned soldiers desiring to go on the land has so far been small, it must be remembered that to date the bulk of returning soldiers have been partial invalids. When the units of Canadian soldiers arrive in bodies for demobilization there undoubtedly will be a big exodus farmwards. These soldiers will have money loaned by the Government to buy implements and this will help to make things hum for implement dealers.

Smith and Thompson explained the working of the plan to a representative of THE CANADIAN MOTOR, TRACTOR AND IMPLEMENT TRADE JOURNAL as follows: The soldier is allowed $2,500 to spend, under supervision, on farm requirements, such as implements, seed, etc., while it is understood the soldier is to get wholesale prices on implements he purchases through the local agent. The soldier has a card which he shows to the dealer. This card bears a number and other details of the contract between the soldier and the Government. The dealer turns over the implements required, enumerates them on the card and sends it to the manufacturer, who in turn collects from the Government. The agent's account is credited with a percentage of the wholesale price in return for setting up the machine and giving the usual service in connection therewith. There is no actual cash transaction between the soldier and the local dealer, though the soldier is called upon to pay freight charges on implements from the local distributing centre.

Most Tractors Sold For Cash

SMITH and Thompson endeavor to get cash for all tractor sales where feasible, and make a strong point of the money saved to the farmer by buying outright. The result is that 75 per cent. of their sales are on this basis. They make the point that it is even advisable for the farmer to borrow money from his bank and pay the rate of interest in order to buy outright. This point is illustrated as follows: Where half cash is paid at time of purchase and balance in the fall, the tractor costs $65 more than the cash price; where three payments are allowed the cost is $85 more than cash price.

The use of literature to show the advantages of their line of implements and tractor has been a help in soliciting among the farmers of Minnedosa district. Advertisements in the local newspaper during the summer season are also helpful to Smith and Thompson.

Automobiles *and* Trucks

See that Owners Insure Cars You Sell

It is in the Interest of the Dealer to See That His Customers Protect Themselves

THE dealer is not directly interested in the matter of automobile insurance, but it is good policy to urge the purchasers of cars to put on adequate insurance. In the first place, it is good business for the purchaser and that means that in the final analysis it is good business for the dealer as well. If the purchaser runs his car over an embankment or has it burned in a garage or has it stolen, he will come back for another if he has insurance to cover the loss. If he has no insurance, his motoring days are probably over; and a sale has been lost.

It is advisable, therefore, for the dealer to understand sufficient about insurance to be in a position to advise his customers. He should, in fact, make a study of the subject. In this connection some facts will be of interest.

Different Kinds of Insurance

The different insurance coverings on automobiles, consist of what are technically known as Public Liability, Property Damage, Collision, Fire, Theft, and Transportation, but possibly the most important are the first three coverings, Public Liability, Property Damage and Collision. The public liability covering is unquestionably the most important feature of the entire automobile risk, as under this form of policy the insuring company agrees:

1. To indemnify the assured against loss by reason of the liability imposed upon him by law for damages on account of injuries to any person or persons.

2. To serve the assured upon notice of such injuries by such investigation thereof, or by such negotiation or settlement of any resulting claims as may be deemed expedient by the company.

3. To defend in the name and on behalf of the assured any suits which may at any time be brought against him on account of such injuries, including suits alleging such injuries and demanding damages therefor, although such suits, allegations or demands are wholly groundless, false or fraudulent.

4. To pay all costs of defence taxed against the assured in any legal proceedings defended by the company, all interest accruing after entry of judgment, and all expenses incurred by the company for investigation, negotiation or defence, together with any expense incurred by the assured for such immediate surgical relief as shall be imperative at the time any injury is sustained. The usual limits of liability are $5,000 for death or injury to one person, or $10,000 for any one accident involving the death of or injury to more than one person. Larger limits may be obtained if required, at an extra cost.

Under the covering of property damage, the company assumes the assured's liability for the damage caused by his car to property of any kind belonging to others. In addition, the company defends at its own expense any suit brought against the owner on this account, investigates each case, and effects settlements where called for. The usual limit under this form of contract is $1,000, but a larger covering can be purchased if desired at a slight additional premium. In Ontario at the present time, this covering includes loss of use of the property damaged.

In collision insurance the insuring company agrees to re-imburse the assured for all damages to his car caused by collision with any object, whether moving or stationary, this insurance being granted in three forms, (a) $25, deductible; (b) $100, deductible, and (c) full coverage. The only difference in these three coverages is that the amounts specified in the first two instances are deducted from any loss, no such deduction being made under the full coverage form. All three collision coverings mentioned contain a clause relieving the company from any liability for loss caused directly or indirectly by fire.

The insurances already mentioned are applicable not only to automobiles used by private owners for business and pleasure purposes, but also to cars operated by garage owners and automobile dealers in the course of their regular business. In such cases, the premium is computed on so much percentage of the payroll expended by the assured or a certain fixed price on each specified driver employed or license marker used by the dealer or garage proprietor.

The Hazards Are Great

There are some dealers who believe that insurance is not a really essential item. The writer has heard of some who even went to the extent of advising purchasers not to bother about insurance, especially when they saw that the expense of it was holding back the prospect. This is not a wise policy. Statistics show that the number of automobile accidents is getting larger all the time. This is due primarily to the fact that there are more cars being operated on the streets, thus increasing the hazard. From such figures as are available, it is seen that only about one-sixth of the cars in the United States are insured and it is altogether probable that the same proportion would hold good in Canada. It is clear that the losses sustained by car owners through lack of insurance must be very great indeed. And this loss unquestionably reflects back on the prosperity of the automobile dealer.

The point will bear reiteration. It is in the interests of the dealer to see that his customers place insurance on their cars.

The Advantage of Fire Trucks

The Enterprising Dealer Has a Live Prospect in His Own Fire Department

THE town and small city automobile and implement dealer has no better prospect for motor trucks than the city council. A live dealer, with the facts that can be secured, can sell the council on the idea of motorizing the fire department. In many of the small cities and towns of Canada the fire horse is still an institution and the chance for profitable business in fire trucks exists for the dealer who cares to seize it.

The most convincing proof of the value of motor equipment in the fire department of any city is found in the cost figures which are kept by one Canadian department. These figures are published every year and no more conclusive proof is needed to show the advisability of a motorized fire department. For instance, in 1915 the fire chief, in the annual report, said that "the more motor apparatus the city has in its fire department the more money it will save, so great is the saving over horse-drawn apparatus." And the figures prove the truth of the statement.

The cost of keeping horses during that year was $3,705.11, compared to $589.11, the cost of the motor equipment. The saving was $3,116.00. In other words, the horses cost over six times as much as the motors. There were 16 horses in use and 13 pieces of motor apparatus. To determine the saving between keeping a team of horses and a piece of motor apparatus, the bureau kept a record of the expense of the hardest working team and the most-used motor apparatus. The team cost $38.60 per month or $463.20 for one year. The cost of the truck-tractor for that year was $15.66. These figures are taken from the fire department's report for 1915 and are entirely reliable. In the face of such a record of expense, it seems that nothing but sinister influence would delay the motorization of any city's fire department, if it were for nothing but the saving in expense. But many other reasons strengthen the position of the advocate of motorization.

With motor equipment, when a call comes in, the engine is cranked and the ponderous motors rumble out and siren their way to the scene of the fire in such quick time that before the fire is really started, the water and chemicals are playing on it. As a direct result of this feature of speed the fire losses in this place have shrunk—the loss per head being less than 66 cents, according to the estimates of the Bureau of Fire Underwriters.

Another advantage that tends to reduce fire loss is the saving in labor. With the old horse-drawn steam engine, three men were needed to operate the engine when at the fire. The engineer had charge of the engine, a stoker kept the fire going and the driver blanketed the horses and walked them up and down. The care of the horses applied to the other wagons, also. Now the chauffeur runs the engine and pump and the services of the two other men are used in fighting the fire, which promotes efficiency.

One of the greatest features in favor of motor equipment in point of maintenance cost is the fact that while the engine is in the fire house there is no expense. On the horse, however, money must be continually spent for feed, bedding, etc., whether he works or not. When this is considered, the cost figures given above can be readily believed. Sometimes, for months a motor will not be called into action and the only expense during this period is the cost of about a gallon of gasoline per month, consumed in running the engine every morning for a few minutes to make sure everything is all right. Anyone can picture the cost of feeding two horses for this period and realize the great difference.

SOME NEW AUTO WRINKLES

A lock-bar has been invented which will hold the clutch pedal firmly in any desired position.

* * *

An awning on a string roller is a convenient attachment to have on the car when you are traveling toward the sun. It takes up but little space, and rolls back very neatly when not needed.

* * *

A little switch has been introduced which when placed on the steering wheel starts a small motor which controls the operation of the brakes. A spring returns the vise to its normal position when the brakes are off.

* * *

A bumper with a skid attached, placed on the rear of a car, is designed to take the shock and prevent a serious wreck or spill in case the rear wheel should come off when going at a fair speed. A similar contrivance has also been introduced for the front of a car and is said to make it easier to take difficult

Stick To One Line

There is as much advantage in choosing one line of machines for your work and sticking to that line, as there is in sticking to one breed of cattle or hogs to raise and handle.

You get to know your machines, their peculiarities, the best methods of adjustment, and as you learn these things you get more work out of the machines with less expense for help and power.

You get better service from both dealer and factory branch because they appreciate good customers.

If you choose a high-grade line like the International in the beginning, you are sure of machines that will work together. With each machine doing its full share of profitable work, each helping to cut down the cost of production, and all together setting a high standard of quality and quantity of work, you would not think for a minute of going back to a hybrid assortment.

Start now and standardize on International machines. Write us at the nearest branch house for any desired information.

International Harvester Company of Canada LIMITED

BRANCH HOUSES

WEST—Brandon, Man., Calgary, Alta., Edmonton, Alta., Estevan, Sask. Lethbridge, Alta., N. Battleford, Sask., Regina, Sask., Saskatoon, Sask., Winnipeg, Man., Yorkton, Sask.

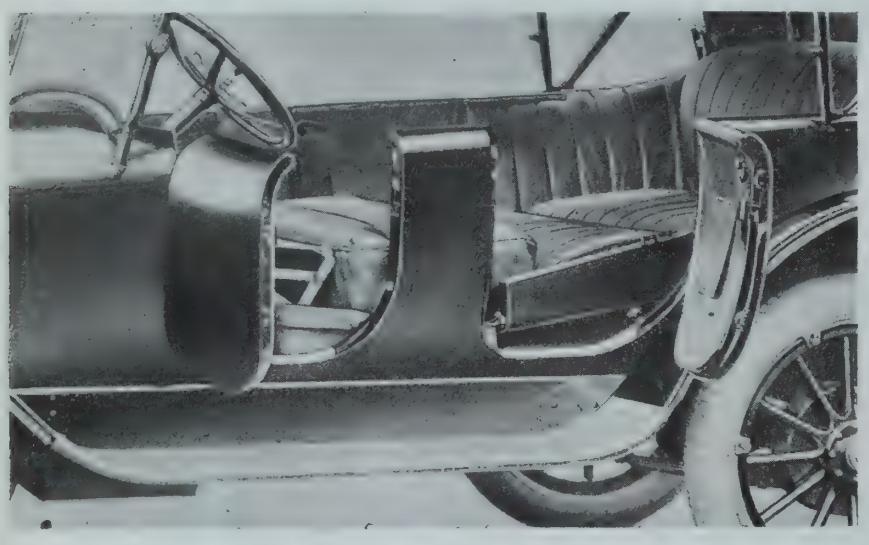
EAST—Hamilton, Ont., London, Ont., Montreal, Que., Ottawa, Ont., Quebec, Que., St. John, N.B.

Autos *and* Trucks

SLEEP IN THE "PAN"

The "Pan" is the name of a new car which will be placed on the market in July, according to information received from the manufacturers, the Pan Motor Co., of St. Cloud, Minnesota. It will be a light, moderate-priced car, and will likely retail at $1,000, or $1,100, F.O.B., St. Cloud. One of its features will be that it can be turned into a "sleeping car," along the lines of a Pullman. Our two photographs shown on this page picture the "1919 Pan" ready for a "Shakedown," if the owner wants to tour and take his own "hotel" with him. The side view and top view give a good idea of what the "Pan," ready for bed, looks like.

At present thirteen officers and directors of the Pan Motor Co., are under indictment, charged with using the mails to defraud. The indictment alleges a stock-promoting scheme, and charges that $5,500,000 was accepted from 50,000 people throughout the United States. It is alleged that a $2,500,000 surplus, claimed by the company, was obtained by capitalizing intangible assets.



Side view, showing "Pan" ready for bed

The officials of the company vigorously deny all charges, and have instituted countersuits against their "enemies." "A complete vindication of the company and its officers," is said to be assured, by B. F. Forsyth, advertising manager, in a letter dated March 13 to the *Canadian Motor, Tractor and Implement Trade Journal.*

The Pan is a light weight, five-passenger, four-cylinder machine, which will be produced in touring, roadster and sedan body forms only. This car is not assembled but is built complete in the company's own shops in St. Cloud. The car was designed throughout by Victor Gauvreau, chief designing engineer of the company, and, although not at all radical, its design embodies many new ideas, as the photographs reproduced herewith will show.

Bird's-eye view of the "Pan" car.

The most interesting feature of this car is its compact motor. It is of a light-weight high-speed, four-cylinder type, 3¼ x 5 inches. Both intake and exhaust valves are 1¾ inches in diameter in the clear. The over-all length is only 27 inches, and the weight less than 400 pounds.

The intake valves are in the head, and the exhaust valves are on the side. The cylinder head is removable, which leaves both sets of valves accessible. The carburetor is bolted directly to the head and the intake manifold is cast integral with the head. The flow of gas from the carburetor is evenly distributed to all cylinders through the design of intake manifold. Hot air is supplied to the carburetor from a passage cast integral with the cylinders.

FAVORS TRACTOR TARIFF

John Muir, of Goold, Shapley, and Muir Co., Brantford, was interviewed recently when a carload of tractors was being despatched to the Canadian West. He characterized the removal of the duty on tractors as one of the "rawest deals ever put over," and said that a tariff of 15 or 20 per cent. would be reasonable. In the Western States there was an important group of big manufacturers, all with their eye on the Canadian West. They could sell more cheaply to a foreign country than in their own, because it was policy and because they sold outright. On the other hand, the Canadian manufacturers had to erect expensive warehouses in the West and send out travelers.

PROTECT THE "BAWLING" CALF

Hon. W. R. Motherwell, in a brilliant speech before Liberal Convention in Calgary, made an apt and homely analogy in discussing the question of duty-free tractors. He said, in part:

"We have seen a little weaning calf bawl when you first take it away from the cow. Well, doesn't that remind you of the Big Interests when the duty was taken off small tractors?

"But that is only the first part. You have all seen calves raised on the cow. You know that when the calf is weaned after ten days, that it bawls a little. But when you have left that calf with the cow for a year, the bawling of the weaning calf is ever so much longer and louder. And when you leave the calf with the cow for another spell, and then try to separate them, the din is simply unendurable. Even the cow bawls in sympathy and fails to understand. That is like the manufacturers of the country. They think they must be raised on the cow, and the din in something awful."

"The main point of this is," added Hon. Duncan Marshall, "that the older they get the harder they are on the cow."

CONCRETE vs. EARTH ROADS

Statistics show that motors running over concrete roads will use less gasoline than those over an earth road. Tests have shown that a gallon of gasoline will take a loaded two-ton truck 5.78 miles over an earth road; 7.19 over the fair gravel road; 9.30 over a good gravel road; 9.48 over a bituminous macadam road; 9.88 over a brick road; 11.78 miles over a concrete road.

SECOND-HAND TRACTOR

Automobiles are often changing hands, and frequently are in almost as good condition when taken over by the second or third owner as they were when first bought from the manufacturer. Tractors are occasionally sold in this way, but usually are not in as good a condition as when they left the warehouse. An exception to this was brought to our notice in a sale a few weeks ago on a farm near Toronto. The tractor, which was bought in 1916 for $1,075, and which was used on a comparatively small farm, was sold for $575, and in such good condition that nothing was needed to put it in first-class running order except a few new gaskets.

NEW CANADIAN PAPER

The MacLean Publishing Company, of Toronto, Canada, are publishers of various trade publications, and have now added the CANADIAN MOTOR, TRACTOR AND IMPLEMENT TRADE JOURNAL, *the first issue of which appeared this month, and will be published each month hereafter.*

The first issue is bright and newsy, and their editorial says that the paper will be devoted to the cause of the dealer in Canada.

We welcome the new paper to the field, and with its backing it should become a valuable paper to the industry.—Eastern Dealer, published at Philadelphia, Pa.

ACCESSORY DEALERS MEET

The convention of the Ontario Retail Automobile, Garage and Accessory Dealers, held in Toronto the first week of March, was not as well attended as was expected, but the enthusiasm of those present made up for the shortage. The decisions were of high order and immense benefit was derived from the exchange of selling ideas, and the new suggestions thrown out for improving the status of the garage men, the automobile dealer and the general repair man.

President S. H. Rowed, of London, showed in his address just how much the association, only a year old, had done for dealers, instancing such things as the fight against the gasoline license fees for dealers, and the removal of the unfair differences in oil competition between the garage men and the service stations.

Secretary W. C. Miller further explained the working of the association affairs, and said that they were now interested in having scale inspection made a public charge instead of a charge on the dealer. They were also protesting against increased telephone rates.

Other speakers were H. B. Moore, of the Toronto Chevrolet agency, on Present Day Problems; J. W. Mackenzie, general manager of the Preferred Accident Insurance Co., on Insurance Problems; C. A. Sharp on the Tire Situation; G. A. Kingston, of the Ontario Workmen's Compensation Board; John C. Kirkwood on Figuring Costs; W. T. McBride on Modernizing Your Garage; B. W. Zieman, of the Retail Merchants; W. H. Wilkinson, Toronto, on Revenue from Accessories; Rupert Hodgins on Unfair Competition, and Percy A. Breakey, Toronto, on the Used Car Problem.

W. G. Robertson of the Ontario Motor League, J. C. Thorpe, of Urbana, Ill., and Mr. Grierson, of the Imperial Oil Co., and many delegates took part in the general discussion of the final session.

A large exhibit of dealers' supplies by many firms, was a feature of the convention. A banquet at the Carls-Rite to the delegates was a most successful affair.

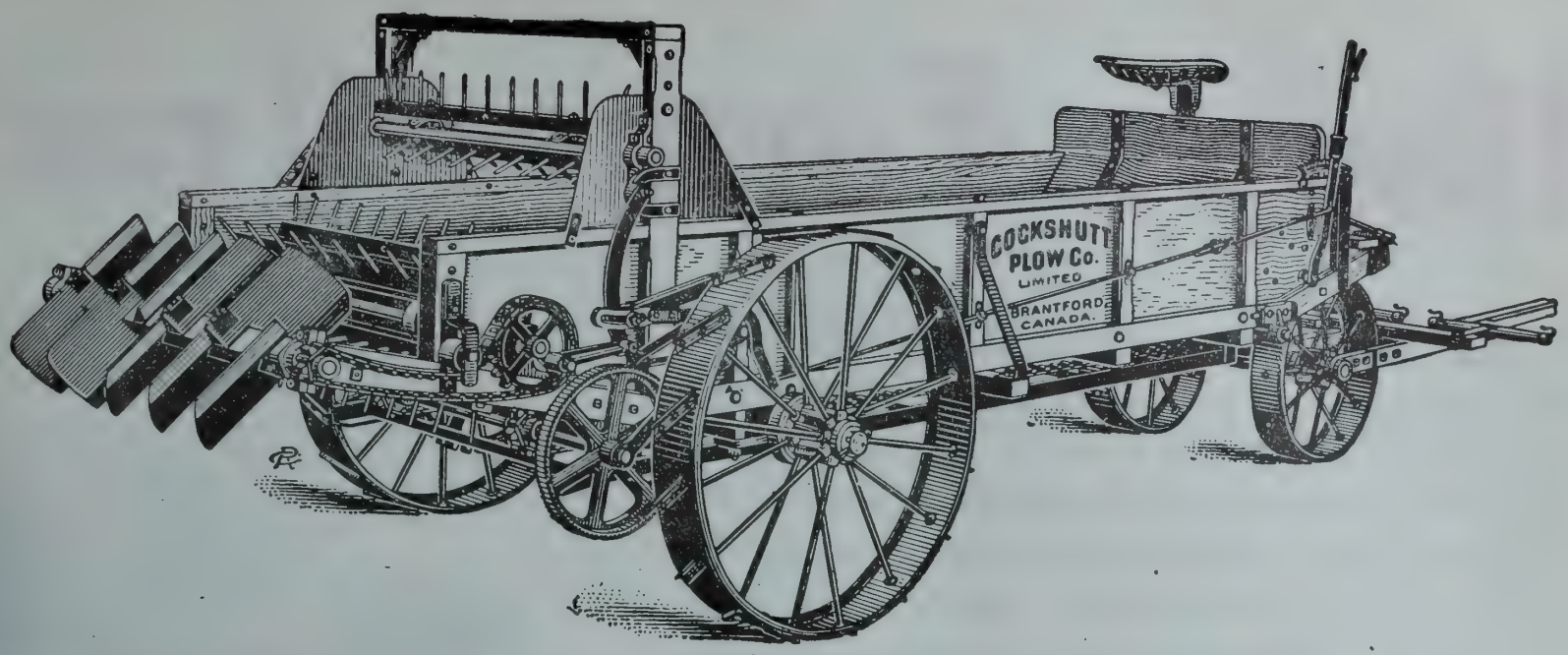
The following firms exhibited: A. C. Lewis Co. (simplex jacks); British-American Oil Co.; Warren Refining and Chemical Co.; Northern Electric Co. (Pasco wire wheels and Titan storage batteries); Perrin Manufacturing Co. (No-Glare device); Imperial Oil, Limited; Hall Carburetor Co.; Marathon Tires; K. and S. Tires; Dominion Supply Co. (carbon remover); A. M. Thorne (spark plug); Toronto Welding Co.; Champion Spark Plugs; Samuel Trees and Co. (automobile supplies); Oak Tire and Rubber Co.; Richards-Wilcox Canadian Co. (automotive equipment); B. F. Goodrich Rubber Co.; S. L. Pearson and Co. (Prest-O-Lite); Goodyear Tire and Rubber Co.; Hyslop Bros., Limited; Cutten and Foster (auto upholstery and tops); Dunlop Tire and Rubber Goods; Elgin Manufacturing Co. (seat spring sets); Dominion Rubber System; John Millen and Son (accessories); Splitdorf Electrical Co.; J. P. Holden Rubber Co.; Gutta Percha and Rubber Co.; J. S. Agar, of Detroit (anti-glare device).

PORTABLE LAUNDRIES

In France portable laundry outfits, carried on heavy wagon bodies which can be coupled together with the sides left down, forming a complete and up-to-date laundry, with capacity enough to handle the weekly clothing and blankets of the whole battalion of troops, were in common use. The steam for heating the laundry water and motor power for moving the plant is furnished by a steam traction engine which had power to run the laundry to full capacity and to haul it over the worst roads.

WOMEN AND TRACTORS

Although the women have not attended the recent tractor schools held at Guelph and Kemptville, Ontario, yet their sisters in Western Canada and in certain Western states are getting ahead of them in running farm power machinery. Recently in Wisconsin the women were taught to run a simplicity tractor about the fair ground, and were given a thorough instruction in the mechanism, so that at the conclusion of the instruction several of the young women present handled the tractor with ease. About 80 young "farmerettes" attended this course.



There are Dozens of Good Prospects in Your Section for a *Real* Spreader

COCKSHUTT Manure Spreader

The business-like farmer knows the value of fertilizing his acres and is fully alive to the value of that "gold mine" in his manure pile. Very often it just needs a suggestion from his Dealer to get him to consider buying a Manure Spreader. And if it's the Cockshutt that's mentioned, the chances for a sale go up 50%, because it is so well advertised and favorably known that it makes its own "prospects" in every section.

Our idea of a successful Manure Spreader is one that will thoroughly carpet the land with finely pulverized manure at a minimum expenditure of horse flesh. And we have it! Moreover—we know it must be giant-strong, simple and rugged enough to stand for years the hardest kind of service. And again, we have it!

It is built low—the top of the box is just waist-high, 41" from the ground, with 17" clearance underneath.

The two revolving, spike-studded delivery cylinders break up the lumps and are very efficient. But we go further —special distributing paddles behind pulverize the manure still more and spread it thoroughly over much more than the machine's width. Strong, direct chain drive—no bothersome gears or clutches. Feed is simple and positive, no matter how big the load. When not spreading, the machinery is not running—a handy lever does the trick. Amount spread can be readily changed by simply shifting a lever.

Cockshutt principles of simplicity, light draft and rugged efficiency are well worked out in this **real** spreader.

Let us send you a supply of literature on these machines —also on other Cockshutt Implements. Handling the Cockshutt line puts you in a position to supply ALL the needs of the farmer—and with goods that he knows have a splendid reputation for quality and service.

Cockshutt Plow Co.
Limited
BRANTFORD, ONT.

Sold in Eastern Ontario, Quebec and Maritime Provinces by

The Frost & Wood Co.
Limited
Montreal, SMITH'S FALLS, St. Jo

Happy Farmer Tractor

The man who owns a Happy Farmer Tractor is proud of it. He knows it is a leader because he has tested it under all conditions, and it has always served him better than he expected. He knows that in the strength of the organization which made it, in the economy of operation, in the correct design the Happy Farmer leads the field. The man who sells Happy Farmer is doubly profited thereby—he creates confidence. He wins the tractor field—in reality he conquers it with a good tractor.

A Phenomenal Success

As a recognized leader of the tractor field, its climb to success has been a steady and a phenomenal one. Yet a greater success awaits it.

The Happy Farmer Tractor market has tremendous possibilities which to date have only been touched. Every farmer with a farm of 80 acres or more is waiting to be convinced that a tractor will pay him, that it will double the value of his farm in very few years, besides the fact that it saves labor, time and trouble.

This is the tremendous market that awaits the Happy Farmer Dealer, waiting to be convinced, to be shown. There is real profit in it for you. Go after it, hard.

Happy TRA

Four Great Sellin

1. **The size, strength, experience and dependability of the organization which makes it.**
2. **Its simple, practical design.**

Experience has demonstrated that there are four fundament factors in which every tractor buyer is interested. They are t main selling features and they work their good in two ways—th

If your territory has not already been snapped up by enterpris

The Renfrew Machinery Company

AGENCIES ALMOST EVERYWHERE IN CANADA

wins the tractor field

arm er
TOR

oints Make the Happy Farmer a Leader

3. Its economy of operation.

4. Its LOW PRICE for its BIG POWER.

lp sell the Happy Farmer tractor which makes good with the rmer and they build up the reputation of the Happy Farmer ctor dealer.

The Idea Back of the Happy Farmer

A tractor can be no better than its makers. The Happy Farmer Tractor expresses the leadership of an organization, which in three short years has grown to be one of America's greatest manufacturing successes.

With hundreds of completed Happy Farmer Tractors being shipped to waiting farmers every month in Canada and the United States, and with the output growing at the rate of 10 to 25% every thirty days, the demand is still greater than the supply.

The actual work of the Happy Farmer in the field or on the belt explains its rapid rise to a place of high and leading merit.

With only 3,700 pounds weight, it will pull three fourteen-inch plough bottoms at an average depth of 8 inches. This plowing test is a sure sales-closer. The tractor develops 2,000 pounds, draw bar pull and 24 horse-power for belt work.

It pays well to sell the Happy Farmer Tractor and thus get the support of a strong organization. It is our purpose to keep the Happy Farmer Tractor in the lead, always in the lead. The Happy Farmer and Renfrew distributors and dealers have made good together and will continue to make good.

ealers---lose no time. Write for attractive selling proposition.

Limited, Head Office and Works: Renfrew, Ont.

EASTERN BRANCH: SUSSEX, N. B.

NEWS — OF THE TRADE FOR THE TRADE

A. Coles, of Strasburg, Sask., has disposed of his garage to Charles Fox.

* * *

The Ontario Government received $1,214,000 from automobile licenses last year.

* * *

The Montreal Automobile Trade Association will hold a Mammoth Motor Show in 1920.

* * *

C. Smith & Sons, Durham, Ontario, are now district distributors for the Avery kerosene tractors.

* * *

The Canadian Collapsible Rim Company, with a capital of $500,000, is about to build a plant in Windsor, Ontario.

* * *

The O. M. Wade Motor Sales Company opened its first annual motor show at its new garage in East Main street, March 12, in Welland, Ontario.

* * *

Thomas Brothers have acquired the garage business next to the Iroquois hotel, Elora, Ontario, from F. Scott, and will specialize in expert auto repairs.

* * *

Three automobiles were very seriously damaged in a fire which broke out March 6 in Evans' and Appleby's garage in Charlotte street, Peterboro, Ontario.

* * *

One person in every twenty-four in the Province of British Columbia owns a car, according to figures recently compiled by the B. C. automobile registry office.

* * *

Permission has been granted the Imperial Oil Company to erect large storage tanks in the West End commons near the G.T.R. tracks in Prescott, Ontario.

* * *

Various agricultural specialties, such as grain picklers, fanning mills, and water tanks, will shortly be manufactured by the W. J. Currie Plant, Brandon, Manitoba.

* * *

Early in March the automobile dealers of Quebec city held a very successful exhibition of the latest models in cars, and it is reported that many prospects were "sold."

* * *

The manufacture of motor car axles, and the construction of a wire wheel with a demountable rim are being commenced by the Hayes Wheel Company, Chatham, Ontario.

* * *

R. A. Lister Co., Limited, agents in Canada for the Avery Tractor, held a very successful school of tractor instruction and demonstration, Stratford, Ontario, March 25 and 26.

* * *

G. B. Sharpe, advertising manager of the De Laval Co., Ltd., Peterborough, Ontario, has resigned, and is now filling a similar position with the Cleveland Tractor Co., Cleveland, Ohio.

* * *

Barney Oldfield is said to be endeavoring to make suitable agency arrangements in Winnipeg for the distribution of the new tire which he is going to manufacture in Cleveland, Ohio.

* * *

During the first three months of 1919 the number of automobiles sold to farmers in the Province of Alberta shows an increase of 50 per cent. over the corresponding months of last year.

Ed. J. Belmore, of Amherstburg, Ontario, has been appointed sales manager for Huron and Perth counties for the Cleveland Tractor Company, with headquarters at St. Mary's.

* * *

D. J. Wright of the Western Canada Motor Car Co., has recently returned to Winnipeg after visiting the factories of the Gray-Dort, Essex, Hudson, Studebaker and Packard Companies.

* * *

N. E. Mahoney, a live garage owner in Tisdale, Sask., has secured W. H. Baron, formerly foreman in the T. Eaton car repair shop, Winnipeg, to take charge of the repair work in his establishment.

* * *

The Auto Specialty Company, St. Joseph, Michigan, is asking the finance committee of the city council of Windsor, Ontario, for tax exemption for construction of a factory in Howard ave.

* * *

The Tire Sales Company, Limited, of Winnipeg, distributors of Goodrich tires and accessories, has moved to new quarters, and is now located at 557 Portage ave., corner of Yonge and Portage.

* * *

The Moose Jaw Tire and Vulcanizing Company, Ltd., is the name of a concern which is handling tire repairs and auto supplies. Their plant is located at 73 High street west, Moose Jaw.

* * *

Thirty-six dealers handling Maxwell cars in Toronto and the neighboring territory assembled early in March at the United Auto Sales Company, 545 Yonge street, and held a rousing convention.

* * *

During the latter part of February the Ford Motor Company of Canada, Ltd., called together its dealers in the Province of Alberta, and held an enthusiastic convention at the Palliser hotel, Calgary.

* * *

Eugene Bushey, of Pinkham, Sask., has entered into partnership with Jesse Dodge, and the new firm of Bushey and Dodge is now engaged in the garage, auto repairing, and electrical business, in Kindersley, Sask.

* * *

D. B. MacPherson, formerly office manager of the Massey Harris Company in Saskatoon, Sask., where he had been located since 1907, assumed charge early in March of the local branch at Swift Current. Sask.

* * *

J. K. Gould, formerly advertising manager for the Ford Motor Car Company of Canada, has been out of the army for some weeks now, and has rejoined the staff of the Campbell-Ewald Company, of Detroit.

* * *

Frank McLachlin, who was formerly service manager for Beemer and Co., and recently discharged from the Royal Air Force, has taken over the Willys-Overland and Willys-Knight agency, for London, Ont., and district.

* * *

Hall Brothers' garage in James street, St. Catharines, Ontario, was destroyed by fire March 14, fourteen automobiles and an auto truck being included in the loss, which will reach $28,000, partly covered by insurance.

Messrs. Kelley Brothers have leased a building in Stanley street, Humboldt, Sask., and opened up a general painting and finishing business, specializing on automobiles and vehicles of all kind.

* * *

Messrs. Ferguson and Wheatly, Limited, have purchased property in Main street, Collingwood, Ontario, and will proceed to erect a modern garage, which, it is expected, will be ready for occupation about June.

* * *

The first annual convention of the British Columbia Ford dealers was held at the Hotel Vancouver, Vancouver, B.C., during the second week in March, William G. Patrick, the manager of the Vancouver Ford Branch, presiding.

* * *

The Breen Motor Company, of Winnipeg, Man., one of the largest automobile dealers in the West, have taken on the distribution of the Lauson Full Jewell tractors, for the Province of Manitoba and also Southern Saskatchewan.

* * *

The Four Wheel Drive Auto Co., of Clintonville, Wisconsin, has decided to establish a branch factory at Kitchener, Ontario. It has obtained a Canadian charter, with a capitalization of $200,000 and will at once proceed to erect a factory.

* * *

Wingham, Ontario, expects that the Seagrave Fire-Fighting Appliance Co. will locate in that town, and manufacture their fire-fighting appliances and also a two-ton truck. It is anticipated that between 300 and 400 workmen will be employed.

* * *

The Humboldt, Saskatchewan Automobile Club held an enthusiastic meeting a short time ago and elected Judge Dickson president and L. G. Calder secretary-treasurer. This club is planning to affiliate with the Saskatchewan Motor League.

* * *

Early in March a very successful tractor school was conducted in Weyburn, Saskatchewan, under the auspices of the Auto Sales Company, (successors to J. J. Gilmore), local agents in Southern Saskatchewan for the Terson-Brantingham Company.

* * *

The death is reported at Estevan, Sask., of George Thompson, well known in this part of Saskatchewan, who a few weeks previous to his death had taken over the agency of the Massey-Harris Company for this district. Mr. Thompson died at Banff, Alta., aged 52.

* * *

The International Harvester Company held a two-day Tractor School March 28 and 29 at the Whitewood Implement Company's warehouse, Whitewood, Sask. Practical demonstrations were made, interesting lectures delivered, and a large attendance is reported.

* * *

A very successful Tractor School, attended by about fifty farmers, was held recently in Estevan, Sask., under the auspices of the Duncan Motor Company, who hold the agency in that district for the Emerson-Brantingham Company tractor. The school was in charge of R. D. Kesson and S. M. Tansley.

* * *

R. MacKay, formerly manager at Minto, N. D., for the Northern Moline Plow Co., has recently assumed the duties of sales manager in the Hart-Parr Company of Canada, Limited. Their head office is at Winnipeg and they have the distribution of the Hart tractors in the Western Provinces.

* * *

Mosiman Brothers, of Guernsey, Saskatchewan, are opening up an automobile and garage business in Yorkton, Sask. They will handle Maxwell cars and trucks, and Chalmers, over a wide territory. Mosiman Brothers are well known in this part of Saskatchewan for their specialization in the raising of Percheron and Belgian horses.

* * *

The Renfrew Machinery Co., has invaded Prince Edward Island, and a very successful tractor demonstration was held at Summerside, Prince Edward Island, March 20, Frank Gamble, "Happy Farmer" Representative, acting as demonstrator-in-chief.

* * *

The Alberta Foundry and Machine Co., is placing on the market shortly a new tractor, made entirely in Canada, under the name of "The Canadian" tractor. They recently offered a prize of $100 for the most suitable name suggested. The prize was won by the Medicine Hat "Nurses' Home."

* * *

The Well Tool & Iron Works Company, Ltd., of Calgary, Alberta, have been appointed distributors of the Wheat tractor, manufactured by the Hession Tiller and Tractor Corporation, Buffalo, N.Y. The first order they placed with the Hession Corporation was for 50 tractors, which by this time have probably been delivered.

* * *

The McKinnon Industries, Limited, of St. Catharines, Ontario, which produced munitions in large quantities, employing between 1,500 and 1,600 workers, has turned its attention to production of peace work. They have started to manufacture automobile parts, including transmission gears, differentials, etc., as well as radiators for automobiles.

* * *

W. G. Pollock has sold his new garage in Neepawa to H. R. Rutledge. This concern will be known as the Neepawa Garage Co. and, besides handling McLaughlin, Chevrolet, Maxwell and Overland cars, will add a line of farm machinery, tractors, separators and farm lighting plants. The transaction involved a cash consideration of more than $15,000.

* * *

The Premier Storage Battery Company is the name of a new concern announced in Peterboro, Ontario. A. Fisher and W. E. Hayes are the proprietors, and they will do all kinds of battery charging, repairing, car washing and polishing. Mr. Fisher was for several years with the Willard Storage Battery department of a Peterboro concern, and Mr. Hayes has just recently returned after three years overseas.

* * *

Ernest Clarke, commercial manager of Herbert Terry & Sons, Limited, Redditch, England, is visiting Canada in order to get in touch with Canadian firms. The concern is one of the leading English metal engineering houses, and carries a big line of goods for motor garages, as well light metal articles, pen clips, spring exercises for the hardware and sporting goods trade, lock springs, flexible shafting, etc.

* * *

The Montreal Automobile Trade Association, Limited, held on March 17, at the Windsor Hotel, the annual general meeting, with a large attendance. Arrangements are being made to include in this association the whole of the automobile trade interests in Montreal, under three groups; the first group will comprise the automobile manufacturers and dealers; the second group will comprise the automotive equipment manufacturers and dealers, including the tire and oil men; the third group will include the licensed garages and repair shops.

* * *

The business of the Megaw Motor Company, Vernon, B. C., has changed hands, having been purchased by W. E. Megaw and H. C. Smithers. It will be operated hereafter under the name of Megaw-Smithers Motor Company, and will handle Chevrolet and McLaughlin cars, Indian motorcycles and St. Lawrence motor launches, as well as carry a full stock of tires and accessories. Mr. Smithers has recently returned from overseas, and is convalescing from wounds received in France.

Selecting the Right Lighting System

What to Consider When Buying or Selling a Plant for Private Use

"When one of Canada's largest corporations (I can't mention the name here) buys an electric storage battery it asks one question: 'What is the area of each positive plate and how many are there in each battery cell?'"

The salesman tipped his chair back and looked around at the others with the idea of letting that "sink in." Then he resumed:

"If these people are as interested in that one point it strikes me that that's the one thing everyone buying a lighting plant with a storage battery should be interested in. It's the question that should be asked first—or, inversely, it's the point the salesman should explain first.

"You know a man will come in to buy a tractor, a motor car, a ditcher or a water system without any hesitation, but when it comes to an electric lighting plant there's always that mysterious box that the 'juice' comes from—the battery. He can see the rest of the outfit and in a general way knows how it operates, but the battery is a puzzle and he has to be 'sold' before he'll buy.

"So remember this: The gauge of a battery's capacity, what the big corporation wants to know—the superficial area and number of positive plates—is what the ordinary man wants to know, only he doesn't know how to ask about it, and when he's told it must be in a most untechnical way. To be sure there are other things to be told, but there is a lot of misunderstanding about the battery that may make or break a sale.

"The larger the surface of the positive plates, the greater the capacity, the larger number of lights and the longer the battery will operate on one charge. The capacity of a storage battery is known technically as so many 'ampere-hours.' What this means in plain King's English is how many hours it will keep so many lights burning and keep them burning at full power.

"There has been a new-fangled term evolved in the States known as 'intermittent service.' Everyone knows that if a battery is given a rest it recovers some of its power—that is it gets its second wind—and some salesmen are out selling what the battery does rather than what the people made it have done. Every battery acts the same in this respect. 'Intermittent service' can't be depended upon like the honest old way of measuring exactly the amount of current stored up in the battery.

"To all outward appearances all lighting outfits are much alike—an engine, a generator, a battery and a switchboard—but, believe me, there is a difference. As a man of experience in such lines, I always say 'buy the separate unit plant and make sure the battery has the greatest superficial area of positive plates possible to a plant of the size required.' That, I think, sums the thing up pretty well.

"Now, you see, while we have taken hold of the question in the middle, we have hit the most vital part of it—the part that every man who is selling lighting plants should tell his prospective customer.

"'Separate unit' is another thing to remember. This is not so hard, because it simply means that the engine, generator, battery and switchboard are separate. There's a big advantage in this. Of course, the switchboard does not mean so much to the purchaser, but be sure you have one that you can fasten against the wall where it won't receive all the shaking of the engine. The battery I have told you about. And now I want to say something about the engine and the generator.

"When the engine and generator are combined, as they are in some plants, it has its advantages and its disadvantages. It means a more compact, prettier plant—just the plant for a rich man or to install where the space is limited, but there are other limitations besides the space.

"The engine has to be speeded up and the generator slowed down. This means that the generator must be wired differently, and consequently costs more if the necessary power is to be obtained from it. The most practical arrangement is the plant whose engine is belted to the generator—an engine of say 3 or 6 horse-power. The matter of speed of the generator is then easily regulated by the ratio of the pulleys and per unit of power developed it will be found that this larger engine—the separate unit engine is nearly always larger—is more economical to operate.

"Now there is another big advantage. In the separate unit plant the owner has not only an engine to operate his electric lighting system, but a power unit that will run his cream separator, his churn, his saw, his water system and do many other things where separate power is required without buying a lot of small motors, and the separate engine can do a lot of other work at the same time it is charging the battery. That I consider is one of the big selling points of the separate unit plant."

The salesman tipped his chair back again. He viewed his audience and then resumed:

"All this is why, when anyone asks me about a lighting system, I always recommend the Fairbanks-Morse Type F plant. It combines all of what I consider the essential features of an efficient and economical plant. Of course, I have nothing to do about selling these plants, but as a mechanical man and one naturally interested in these things, I can quickly distinguish the good features. The trouble with you fellows is this—when you sell an electric lighting plant you describe it in terms too technical for the purchaser to understand and he gets scared or, if you don't happen to know you get scared, and the result is many times a sale lost.

"Always remember this—size or area and number of positive plates. That's what tells the capacity of a battery. Number of hours of straightaway current for the required number of lights—never mind the 'intermittent stuff'—is another thing to be remembered. And then there is the separate engine—the engine that furnishes power enough for the lighting plant and enough more to do other work. This is the easiest plant to sell and the most satisfactory plant to the customer.

"This type of plant can be quickly converted into an automatic affair, made to begin charging at the touch of a button and stopping automatically when fully charged.

"There's one feature about the Fairbanks-Morse Type F plant that appeals to me, and that is the engine. These people have made their "Z" Engine the power unit for this outfit, and the "Z" has long since established itself as an engine particularly adapted to farm work—a powerful, sturdy, economical engine, burning cheap fuel. They tell me that over 200,000 farmers are using the Fairbanks-Morse "Z" Engine, and that's a pretty good recommendation for it.

"Now, if there's anything you want to know about the separate unit electric lighting plant, just use this coupon.

The Canadian Fairbanks-Morse Co., Limited,

St. John, N.B.; Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria.

Send me information about the Type F Electric Lighting Plant without obligation to me.

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POWER LIFT DISC PLOW

The La Crosse Plow Co. of La Crosse, Wis., announce the "Montana" power life disc plow.

The beam construction provides for adjustment of the spacing between the discs. These discs can be set either fourteen inches or seventeen inches apart. Where the plow is equipped with discs set fourteen inches apart and wider spacing is desired, one disc and standard can be taken off and the remaining discs set seventeen inches apart, giving more clearance. The necessary bolt holes for this adjustment are provided for in the main beams.

Where necessary one or more discs and standards can be taken off and the near axle moved forward, thus using the plow with fewer discs without any respacing of them being made. When this is done the main beams will project over the rear axle.

The La Crosse Montana Disc Plow is furnished in the following sizes, subject to adjustments mentioned above: 4 Discs—Wide Spacing, 2,800 pounds; 5 Discs—Wide Spacing, 3,100 pounds; 6 Discs—Wide Spacing, 3,400 pounds; 7 Discs—Narrow Spacing, 3,600 pounds. Discs Blades, 24 in. x ¼ in. or 26 in. x ¼ in.

The La Crosse disc bearing is claimed to be the most perfect type of bearing that can be found for this purpose. It is a chilled bearing working in a chilled socket closed at the rear end. It is absolutely dust proof and the slant of the bearing retains the oil. Hard oil cups are used which properly grease the bearing without removing the disc.

The life of a disc plow is in the bearing and it is of the greatest importance that it can be the very best. In many years' experience in selling disc plows, the manufacturers say they have never had to replace a bearing on account of natural wear.

QUITS $2,000,000 JOB

Harold Wills, chief engineer of the Ford Motor Company, said to have been receiving a salary of approximately $2,000,000 a year, tendered his resignation March 14 to the motor company and the Ford interests.

He has been associated with Henry Ford in the Ford company for the last 18 years, and as the automobile wizard's right-hand man he has had much to do with the wonderful production system of the company.

Fifteen years ago Ford asked Wills to help him in the design of a car the former had in mind. Ford is said to have told Wills that he would not be able to give much salary, but agreed to pay 5 per cent. of all he, Mr. Ford, should make. This arrangement, with modifications, is understood to have remained in force during the association of the two men.

Mr. Wills had charge of the manufacture of the Liberty engine and cylinders for the aviation power plant in the Ford factory, and also served as confidential adviser to the War Department during the war.

HUNS HAND OVER PLOWS

Consideration of a document tabled by the Secretary of State for External Affairs at Ottawa, detailing the additional terms imposed on the Germans on January 17, when the armistice of November 11, was extended for a month, shows that although Germany loses a vast amount of material she will also secure one advantage, that of having a large number of French and Belgian agriculturists using agricultural machinery and implements of German make and becoming habituated to their use.

For instance, it is of great interest to manufacturers in Canada of agricultural machinery and implements to know that the Germans were given permission to substitute for 500 locomotives and 19,000 cars which they could not deliver the following: 400 two-engined steam-plow ditchers, complete with suitable plows, 6,500 drillers, 6,500 manure distributors, 6,500 plows, 6,500 Brabant plows, 12,500 harrows, 6,500 scarifiers, 2,500 steel rollers, 2,500 Cross-kill rollers, 2,500 mowing machines, 2,500 haymaking machines and 3,000 reapers and binders.

All this material was to be shipped either new or in very good condition with all accessories belong to each implement, and with the spare parts required for eighteen months' use. One-third of the total quantity was to be delivered by March 1, and all was to be delivered by June 1.

CHAMPION POSTER

A consistant and spectacular poster advertising campaign has been carried out this year by the Champion Spark Plug Co., of Toledo, Ohio., in every city where an auto show has been, or will be, held. The poster used for the occasion was of the 24-sheet variety, specially designed and printed in seven colors. Clear across the top of each sheet, appeared the message "Visit the Automobile Show" in bold letters and below, on either side, two large circular spaces—one designating the place of the show, the other the date.

This co-operative form of advertising has made a big hit, especially among the members of the various automobile associations who were instrumental in promoting the shows. It also appealed strongly to the Champion Spark Plug dealers as it gave them an excellent opportunity to boost their sales of spark plugs by linking up their local advertising with this poster showing.

NATIONAL STEEL CAR

Just three years ago the National Steel Car Company, of Hamilton, started to build a Canadian motor truck. Now it is announced that it is necessary to rebuild and enlarge the plant.

The name chosen for the new Canadian truck was the "National," with the striking, distinguishing radiator plate, a union jack enamelled in colors.

J. L. Acker, the man who put the National truck on the map, came to Hamilton from New York City, where for the past few years he was connected with one of the largest manufacturing concerns of this kind.

Mr. Acker is an old Ontario boy, being born and having lived for many years in Middlesex county. He is enthusiastic over the way the Canadian public are receiving this Canadian-made truck and feels confident of a very successful future for the National, because it is built right—built to meet Canadian conditions, and what is just as important to the country—built in Canada.

Business has grown so rapidly that it is found necessary to entirely rebuild the motor truck department, which is part of the National Steel Car Company's plant. This is the largest plant of its kind in Canada. Plans have already been prepared and it is expected the new buildings will be under way almost immediately.

Major Dahlquist, designer of the "National," commenced his business career with the Peerless Motor Car Co., and since then he has held important positions in the automobile industry such as designer and chief draftsman for the Thomas-Detroit Motor Car Company; chief engineer for the Velie, International and Lippard-Stewart Motor Car companies; factory manager, Timken-David Brown Company; supervisor, Timken-Detroit Axle Company.

Up to the present time they have specialized on heavy duty trucks, two, three and a half and five-ton capacity. They are now getting under way a lighter truck—one, one and a half and two ton, suitable for the needs of the farmer.

An interesting feature about the National Company was that even though materials and labor were high during war-time, it continued to seek peacetime orders, with the result that not only did it not have to lay off help when peace was declared, but had positions waiting for returned men. Present orders include contracts to supply steel railway cars to the Canadian, India, Malay and British Governments.

P.E.I.'s FIRST SHOW

Prince Edward Island's first Annual Motor Show was held March 19 and 20. Considering that this province has been opened to the motorist for only a very short time, a wonderfully enthusiastic and representative line of exhibitors was present. The automobile show was opened with addresses by the Lieut.-Governor, the Mayor of Charlettetown, and the U.S. Consul. Lieut.-Governor McDonald congratulated the promoters of the show upon their enterprise, and referred to the changed state of affairs in regard to automobiles over that which existed a few years ago. Cars exhibited were: Overland and Willys-Knight: Maxwell and Chalmers; a full line of Fords, including trucks, delivery cars and touring cars; McLaughlins and Chevrolets; and International trucks, exhibited by the International Harvester Co.

I.H.C. CHANGES

Executive and sales organization changes have been announced by the International Harvester Co., Chicago, as follows:

Alexander Legge, who has been general manager since 1913, has also been made a director and vice-president. Herbert F. Perkins, division manager in Charge of manufacturing and raw materials, has also been made a vice-president.

W. V. Couchman, heretofore division manager in charge of sales, advertising, and collections, has been elected vice-president in charge of European business, including manufacturing and sales with headquarters in Europe. A. F. McKinstry, heretofore division manager in charge of experimental work, purchasing and traffic, has been elected a vice-president and will assume Mr. Couchman's duties in charge of sales, advertising and collections, except for Europe.

H. B. Utley, formerly executive assistant and acting works manager, with supervision over the tractor works, Chicago; the tractor, engine and cream separator works at Milwaukee, and the motor truck works at Akron, O., has been elected vice-president in charge of operations heretofore directed by Mr. McKinstry, except for Europe. Lieutenant Cyrus McCormick, now in Government service in Washington, succeeds Mr. Utley. It is expected that Lieutenant McCormick will be relieved from Government service in time to assume his duties with the company May 1.

Frank Culbertson, who after nearly forty years of direct and indirect service of the Harvester interests has asked to be relieved from active service, is succeeded as sales manager of the American company by J. F. Jones, formerly manager of the Canadian sales. A. L. Upton, formerly assistant domestic sales manager, has been appointed manager of Canadian sales, to succeed Mr. Jones. J. A. Everson, formerly manager of engine and tractor sales for the American company, has been appointed assistant manager of domestic sales, succeeding Mr. Upton. E. F. Bolte has been made assistant manager of Canadian sales.

T. A. Coleman, for many years Northwest district sales manager, retires at his own request, and is succeeded by W. P. Wells, who has been manager of the Eastern district. C. E. Allison, formerly manager of tillage and seeding machine sales for the American Co., has been appointed district manager for the Eastern district, succeeding Mr. Wells.

IMPLEMENT EXPORT

Representatives of the farm implement manufacturers were in conference during the past month with the Canadian Trade Commission in Ottawa to arrange for the extension of export trade, and preliminary plans were proposed by which foreign business could be obtained to better advantage by this Canadian industry. In transition from the keen competitive conditions that have existed for many years, it is suggested that manufacturers of implements unite in maintaining a single selling agency, to go after business agressively on much the same basis as several other groups in Canada, the expense of this to be distributed pro-rata among the various members of the group. As far as credit is concerned the plan has been suggested that these shall be secured from a common fund to be drawn from the various members of the group, whose contributions shall be determined according to the magnitude of the interest involved. The agricultural implement industry stands preeminently as a Canadian manufacturing business that has long-established export connection, and the renewal of foreign business is looked for with a minimum of delay. It is felt that trade along these lines will be very extensive in the near future with all the European countries that were importers of Canadian farm implements before the war and are now so much in need of aids to reconstruction.

GASKET CAUSES LEAK

In overhead valve engines, where the valves are carried in removable cages, gaskets are used to give a tight joint when the cage is screwed in place. This jacking very frequently becomes soft and the result is a leak around the valve, which may be difficult to locate unless one is aware of this likelihood. Similarly in multi-cylinder engines the gaskets used at the point where the intake manifold joints the different cylinders should be carefully examined whenever the manifold is taken off, as leaks are likely to develop here.

LISTER CO. CHANGES

W. J. Ellis, second vice-president and general manager of R. A. Lister & Company (Canada) Limited, goes over to England during April, having been ordered by his doctor to take several months' rest owing to the state of his health. R. Howell, secretary of the Lister Company, takes over the management meanwhile. Mr. Howell was for many years manager of the Premier Separator Company, and on that company being merged into the Lister Company, he took over the secretaryship of the latter concern.

W. P. Messenie, who is manager of the Avery Tractor department, now takes up the duties of sales manager for Eastern Canada in addition.

CHANGE IN NAME

The Crossen Metal Works, Limited, of Winnipeg and Regina, is the new name of an old-established concern—The Winipeg Steel Granary and Culvert Co., Ltd. There is no change in the personnel, it is announced, and the main reason for an alteration in name is that they may have a name which will embrace all the lines they manufacture.

PETERBORO' MEETING

The annual meeting of the Peterborough Automobile Association was held during the latter part of March. C. E. Canfield was elected President, and C. O. Fisk, secretary-treasurer. In this county, it was stated at the meeting, 1,489 cars were registered, covering 36 varieties. 53½ per cent. were from the country outside of the city, and 46½ per cent. were from the city of Peterborough. After making a computation based upon the relative population. It was learned that in the city there is one car to every 30 people, whereas in the country there is one car to every 24 people. The approximate value of the cars in the country outside the city of Peterborough is $600,000. The maintenance of this value of cars undoubtedly could be reduced, it was stated at the meeting, by 75 per cent., if they were operated on improved roads.

Here's Sprayer Business for YOU

—the Iron Age Line with TROUBLE-PROOF Pumps

IRON AGE Sprayer Pumps are built upon the stuffing-box and plunger principle — an exclusive Iron Age feature which does away with plungers that corrode, and leather and rubber valves that rot. The bronze ball valves never leak or get out of order. These pumps always deliver the spray at tremendous pressure, driving the poison cloud around every leaf and stem. And they're always outside—easy to get at.

Made in Canada

Iron Age TRACTION (axle-driven) Sprayers cover four and six rows at a time, and with the orchard attachments many farmers can do all their field, orchard and vineyard spraying with one outfit—a big selling feature. Iron Age BARREL Sprayers are easily loaded on wagon, cart or sled and taken anywhere. With the row-spraying attachment, they are adapted to spraying row crops as well as trees, vines, shrubs, etc.

Dealers like to sell the Iron Age line of Farm, Garden and Orchard Tools because it has been making friends in Canada and the United States since 1836. Dominating advertisements in the Canadian farm papers are now stimulating the demand.

Write to-day for catalogue, prices and terms

The Bateman-Wilkinson Co. Ltd.
39ER Symington Ave., Toronto, Can.

IRON AGE
Sprayers

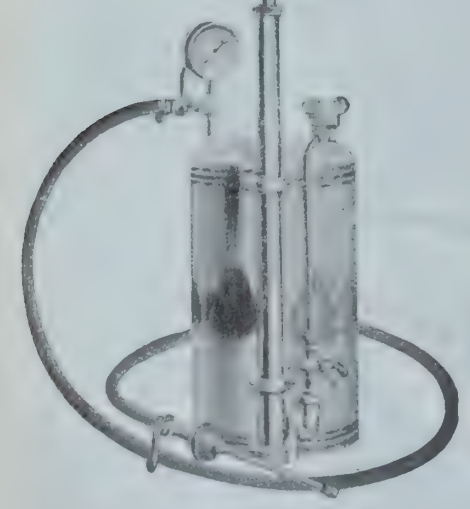
New Equipment

AUTO ENGINE CLEANER

The Eureka Auto Engine Cleaner, manufactured by the Bishop and Babcock Co., Cleveland, Ohio, has been on the market for some little time, but seems recently to have become very popular.

The Eureka Cleaner is made especially for cleaning automobile engines, but may be used for cleaning machinery of most any kind. With it every part is cleaned quickly and thoroughly. The Eureka Cleaner is a great time saver and every user has been more than pleased. There is no chance of soiling clothing, for the long spray nozzle reaches down into the parts and cuts away the dirt without splashing.

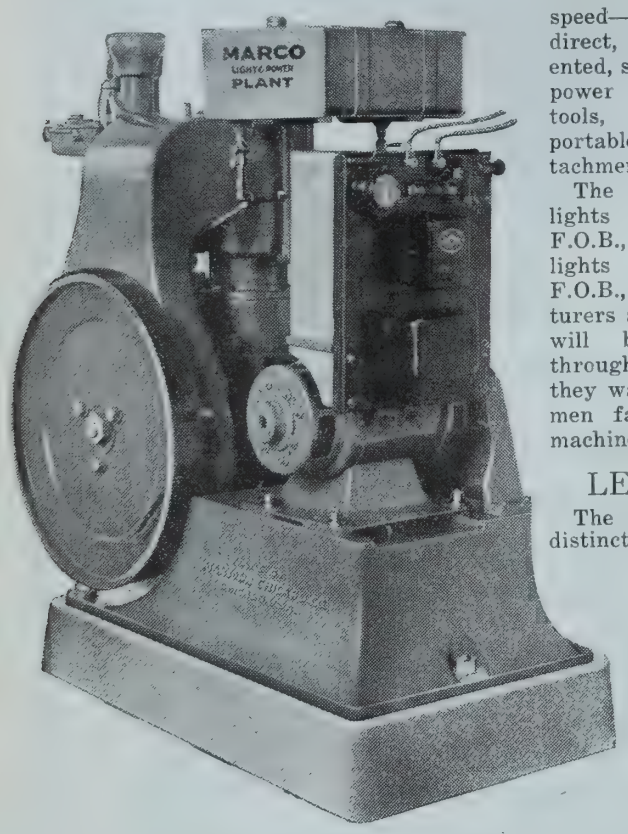
The equipment consists of a 3-gallon, seamless, galvanized steel tank with special hand pump attached, gauge, safety valve, spray nozzle with cock and 10 feet of the best rubber tubing. It is easily operated. The tank should be two-thirds full of gasoline; then close the outlet cock on tank and pump up a pressure of from 80 to 100 pounds. Next close the air inlet cock, open the other air cocks, and spraying commences. The spray is perfectly controlled by means of the cock on the nozzle. Cleaning should always be done in the open air and the parts cleaned should be oiled afterward. If desired, kerosene can be used instead of gasoline.



NEW LIGHTING PLANT

The Marco Light and Power Plant, advertised as "the first single base unit with silent-chain drive," is announced by the Marmon Chicago Company, Chicago, Ill. The points of excellence claimed are five in number; slow speed—four horse-power motor; direct, silent-chain drive; patented, simplified control; surplus power for all farm lighting, tools, and household devices; portable engine for binder attachment.

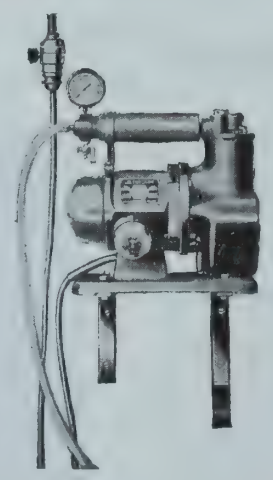
The prices are: Model 1, 85 lights (20 watt) $5.95 (retail) F.O.B., Chicago; Model 2, 100 lights (20 watt) $625 (retail), F.O.B., Chicago. The manufacturers announce that the Marco will be distributed mainly through automobile dealers, as they want the plant handled by men familiar with high-grade machinery.



LECTROFLATER

The Lectroflater occupies a distinctive position among air compressors, because of its unusual design. It is the only complete electric air compressor built as a compact unit, with motor, compressor and transmission all enclosed in one frame.

There are several features distinctive of the Lectroflater which are well worthy of note. Its compact completeness—there are no exposed mechanical or electrical parts, which makes it perfectly safe for even a child to operate. It has an automatic forced draft cooling system. The air is drawn in through the commutator end cover plate, around the armature and field, and passes through an air chamber which surrounds the cylinder, keeping the motor winding and compressor cyinder cool at all times and making the operation much more efficient. There is no cooling liquid to evaporate or freeze in winter. Lubrication is obtained by automatic wick feed to all bearings and with a special grease instead of oil, which always insures a sufficient supply of lubricant and at the same time prevents flooding the cylinder and getting oil or oily vapor into the air. This makes it possible to obtain clean, cool air from the Lectroflater.



The Lectroflater has a specially designed motor, which will operate from any electric lamp socket, on either direct or alternating current. It is so designed that it will start the compressor against 150 pounds pressure, without the use of either a hand or automatic unloading device, and it will operate the compressor continuously against this pressure. This motor has been built especially for this service, and, therefore, gives efficient operation. These features are incorporated in the design of the Lectroflater, so that it requires only negligible attention. There is no water to freeze or evaporate, there is no oil level to maintain—simply pack the gear case and grease cups with grease about four times a year.

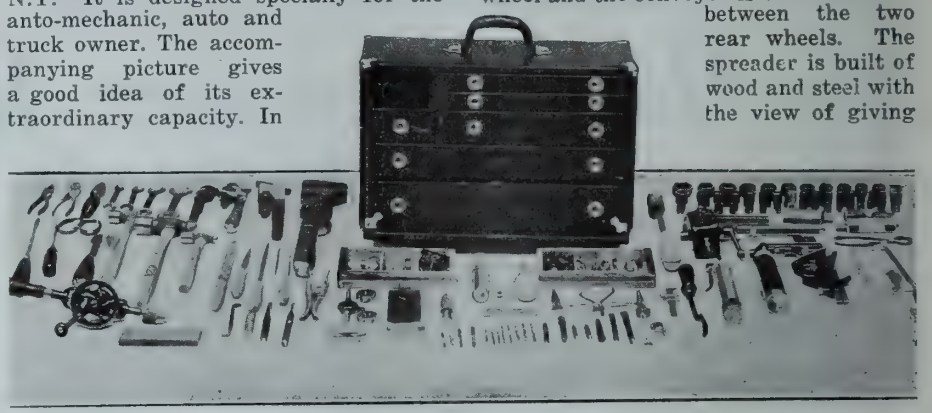
These outfits are all furnished complete with a large, accurate pressure gauge, electric switch, attachment plug and tire connector, long serviceable rubber hose and heavy duplex electric cord.

Ou'side Dimensions

Long	Wide	High	Approximate Weight	Price
20¼	9¼	13¼	23 lbs.	$14.25

GARAGE TOOL CHEST

A new Garage Chest is announced by the Union Tool Chest Co., Rochester, N.Y. It is designed specially for the anto-mechanic, auto and truck owner. The accompanying picture gives a good idea of its extraordinary capacity. In addition to its great capacity, the "Union" Garage Chest is conveniently arranged, as the two small top drawers are fitted with movable partitions for small parts and for delicate instruments such as battery gauge, etc.



The frame is thoroughly-seasoned, kiln-dried, selected oak. Drawers, drawer pulls, slides and handles are strong and constructed to save space. The outside finish is filled, stained, shellaced, and varnished; the inside of the frame and each drawer is finished with an oil-proof and water-proof preparation.

Inside Dimensions—Inches

	Long	Wide	Deep		Long	Wide	Deep
2 Drs.	4	7⅜	⅞	1 Dr.	12⅞	7⅜	2⅛
1 Dr.	4	7⅜	2⅛	1 Dr.	18¼	7⅜	2⅛
2 Drs.	12⅞	7⅜	⅞	Tray	18	7⅜	3⅛

ONE-MAN SPREADER

A modern one-man Straw Spreader which handles the straw just like a manure spreader handles manure is being marketed by the Litchfield Mfg. Co. of Waterloo, Iowa. The operator on this machine sits in the seat and regulates it just like a manure spreader is regulated, trusting the machine to do the rest. The distribution is even and perfect, placing the straw on the ground in a nice, regular layer, 7 feet wide behind the machine so that the next "lap" can be made to match it in just the same manner as a manure spreader does its work.

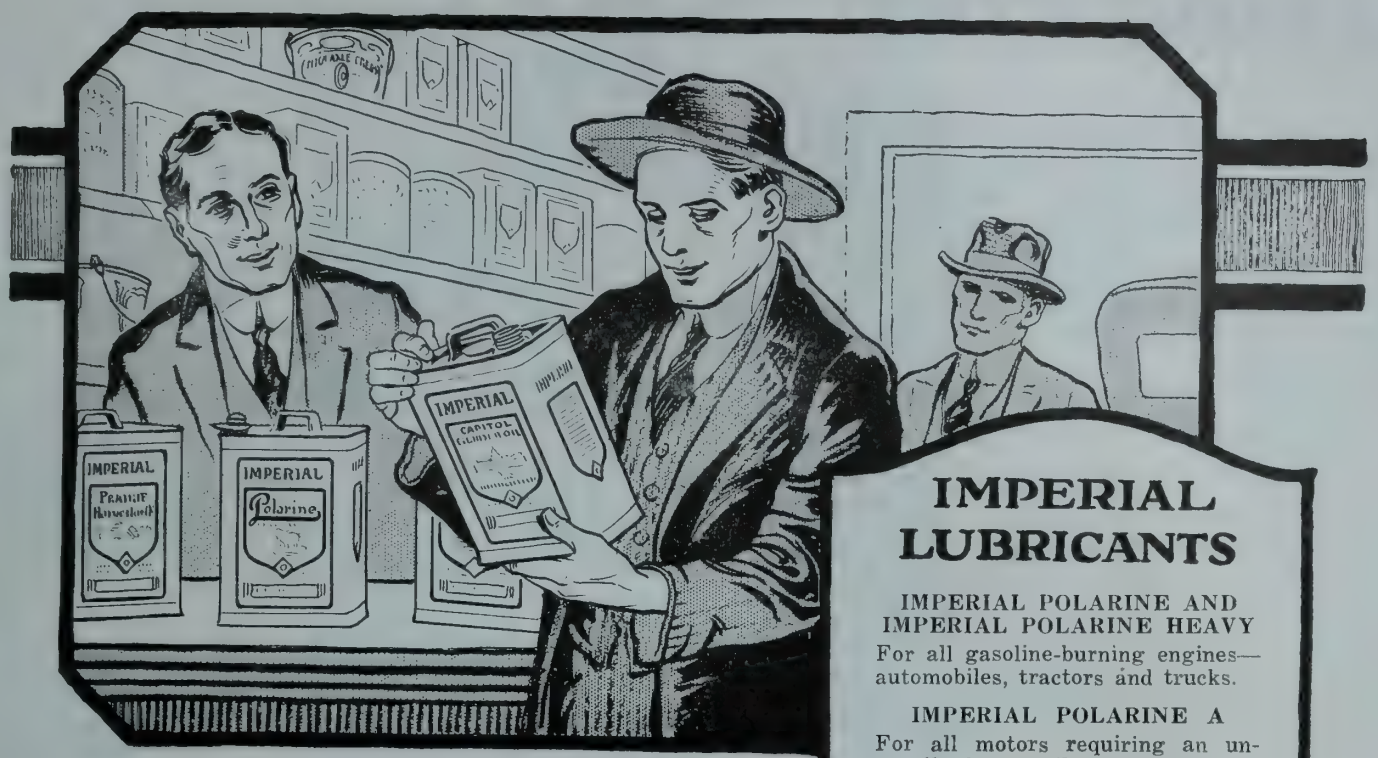
This spreader is mounted on four wheels, and the width of the tread is 7 ft. 10 inches. As the front wheels are mounted on pivot axles, just as an automobile wheel is, the possibility of the load tipping is done away with, and also makes it run light and free without any tongue whip. The driving of the beater wheel and the conveyor is evenly divided between the two rear wheels. The spreader is built of wood and steel with the view of giving not only perfect distribution without manual labor, but also to command the lightest draft and the greatest stability and general durability.

One of the distinctive features of this straw spreader is that it delivers from the top of the load. The manufacturers claim many other merits for it and point out that it is the result of a great many years of research and experimental and demonstrative work.

Praised be the Saints

"I be right glad to see yē back again, Harry, my lad. . And what be that there siller medal you're wearing?"

"Oh, that's my D.S.O., uncle—Done Salutin' Officers!"—*Turner's Weekly.*



A Customer Worth Pleasing

The farmer is a great user of lubricating oils of all kinds. Get his trade with Imperial Farm Lubricants. There's an Imperial Lubricant for every farm machine — tractors, trucks, stationary engines, threshers, binders and automobiles. Each lubricant does its work perfectly and economically because it represents Imperial quality.

Both Imperial reputation and advertising are making new users for our lubricants daily. We tell the farmer what oil to use for each machine or part of each machine. It makes every oil here described a demanded article.

It will pay you to put in a good stock of each Imperial Lubricant. Prepare yourself for every demand.

IMPERIAL LUBRICANTS

IMPERIAL POLARINE AND IMPERIAL POLARINE HEAVY
For all gasoline-burning engines—automobiles, tractors and trucks.

IMPERIAL POLARINE A
For all motors requiring an unusually heavy oil.

IMPERIAL KEROSENE TRACTOR OIL AND IMPERIAL KEROSENE TRACTOR OIL EXTRA HEAVY
For kerosene-burning stationary engines and tractors

IMPERIAL PRAIRIE HARVESTER OIL
A heavy-bodied oil for open bearings of threshers, binders and separators.

IMPERIAL ELDORADO CASTOR OIL
A thick oil for worn and loose bearings.

IMPERIAL CAPITOL CYLINDER OIL
For steam cylinder lubrication—tractors and stationary engines.

IMPERIAL STANDARD GAS ENGINE OIL
For stationary and portable engines using either kerosene or gasoline.

IMPERIAL THRESHER HARD OIL
For grease cup lubrication of bearings. A clean, solidified oil.
Imperial Farm Lubricants are for sale in ½, 1, and 4 gallon sealed cans, half-barrels and barrels.

IMPERIAL OIL LIMITED

Power - Heat - Light - Lubrication

Branches in all Cities

NO SIDE FLASH
with
Shinn-Flat

SHINN-FLAT is the only Lightning Conductor in Canada or United States made in accordance with the latest scientific discoveries. Its exclusive flat-woven form is endorsed by the most eminent authorities in the electrical field as being superior.

Lightning cannot harm any building epuipped with Shinn-Flat Lightning Rods. Protection of this kind enables you to sleep better during the season of electric storms.

Prof. Wm. H. Day, Canada's Recognized Authority on Lightning Prevention, who has been an important factor in Canada for almost twenty years in the development of Lightning Protection, is now training men to carry out his proven principles of scientific installation of Lightning Rods.

We teach you everything that is necessary to know. Any man who understands the principles of building construction can soon master the details of scientifically applying Shinn-Flat protection to any building, and can soon build up a very profitable business.

Live dealers in Eastern Canada will want the Shinn-Flat Agency this year, because Shinn-Flat is the only Lightning Rod that is woven flat, in accordance with manufacturing recommendations of the most distinguished electrical authorities of North America and England.

Send for full information and literature.

SHINN-FLATT
MADE IN CANADA

Shinn Mfg. Co. of Canada
LIMITED

PROF. WM. H. DAY
Sec'y. and Mgr.

GUELPH, ONT.

Important Information to the Automobile Owner

One of the essential features in the operation of a car is perfect lubrication.

This can only be obtained by the use of high-grade lubricants having the following qualities: Freedom from carbon—containing the essential lubricating properties—and having a proper amalgamation of the materials used in the manufacture.

In "1000 MILE" Lubricants you have a combination of the very best materials, both scientifically and chemically combined, all of which have been thoroughly tested and proven to be the acme of perfection.

If you cannot secure these from your dealer communicate direct with us and we will supply you.

MANUFACTURED BY

The Dominion Oil Co., Ltd.
HAMILTON, ONTARIO

Office: Royal Bank Bldg. **Phone Regent 1003**

Accessories and Repairs

ACCESSORY TRADE OUTLOOK

The accessories business so far has been suffering both from the uncertainty as to the tariff changes, and from the fear that lower prices were going to follow soon. Thus a hand-to-mouth buying policy has been followed by the trade generally. But now that spring is here and dealers see that they must have stock if they are to get any of the business this year, they are buying more freely. One accessory supply house has come out with their catalogs and price lists and others are following.

It looks almost certain now that present prices will obtain for some time and with the drying up of the country roads, a big business is in prospect.

W. C. Miller, secretary of the Retail Merchants' Association, says that the automobile trade has been held up some owing to the uncertainty about the 10 per cent. import tax on autos. Buyers do not show any hurry to pay the present prices if by waiting a possible $200 reduction on a $2,000 car is obtainable. Also at the signing of the armistice there were 800 Ford bodies for trucks ready for shipment overseas. These were then thrown on the market and one enterprising dealer in Toronto secured these for the Canadian market. This fact has rendered new business rather uncertain. With it we have the many sales of used cars and equipment bought from the munitions factories. The result has been a harvest for many dealers and second-hand car dealers were never busier. Repair men also have experienced much activity.

That the year is going to be an exceptionally good one for accessories, is a foregone conclusion. The feeling is in the air that as soon as spring opens up, business is going to revive with a rush. Dealers who wish to be in on this trade will have to be wide-awake enough to have their orders placed in such a a manner as to ensure delivery before the trade goes by.

Aside from the uncertainties of tariffs and forced sales, the future holds out no prospect for some time of very much lower prices, as one writer sees it.

The decline in present prices for nearly all products will come gradually. It was twenty years after the conclusion of the Civil War before prices were down to the level which existed in 1860. The farmer cannot expect to purchase farm implements and materials at pre-war prices at least until the time comes when he receives pre-war prices for his farm products. All these things are on a relative basis. A gradual decline in prices, which is the way the decline will and must come, will protect the dealer so that he will have ample time to dispose of his stocks.

DISPLAY ACCESSORIES

It was good advice given by Mr. Wilkinson at the accessories convention, when he told garage men to display their goods better. A great many more sales could be made by so doing. Also interviewing all customers who come into the show pays.

WANTS TAX OFF CARS

The arguments made by W. G. Robertson, secretary of the Ontario Motor League, for the removal of the ten per cent. tax on cars were strong ones. Greater service to the public is given by making it possible for more people to buy cars and so get into business.

MORE ENGINES NEEDED?

On nearly every farm where one engine is needed, two are needed—one small engine for the light work of the household, and a heavier and more powerful engine for the barn and shops. Is this not true?

THE WORST BUGBEARS

From the answers to questionnaires sent out by the U. S. Department of Agriculture to farmers, it was found that from 2,179 reports the question, "What part of your tractor gives you the most trouble?" was answered as follows:

Magnetos	299
Spark Plugs	110
Gears	108
Carbureter	104
Bearings	80
Cylinders and pistons	61
Clutch	59
Valves and springs	43
Lubrication	29
Starting	28

This information gives one a good idea of what best to study and specialize on in one's handling of the business. It always pays to be able to discuss these troubles, to know your goods and how to handle them. There is no better way of getting in on a good selling line.

CARE OF THE EXTRA TIRE

The extra tire that is carried with almost every car is not given much thought by the average driver, and when it is put into service after having been hauled about exposed to the sun and air for several months, he wonders why it is soon worn out.

Exposure to sunlight causes the rubber of a tire to crack, destroying its elasticity. If a tire is used a short time before it is carried as an extra, allowing the pores of the rubber to become filled with clay, it will not wear out so rapidly. The tire should also be protected with a cover.

Also be careful not to store tires in a warm place. Heat and sunlight bring the sulphur in the tire to the surface and cause it to combine with oxygen in the air, spoiling the tire. Select a dark, dry room, with a temperature of about 40°, if you must store tires, and they will keep in good condition.

SOAK THE DISK

When the leather disks on the plungers of an automobile tire pump become hard it requires several times the former number of strokes to inflate a tire. To remedy this remove the disks and soak them in neat's-foot oil for an hour or so. If the leathers are badly worn, they should be replaced. Sometimes the trouble may be partly remedied by putting a few drops of oil in the cylinders, the oil being absorbed by the leather.

FOR UNSIGHTLY RADIATORS

Because of the difficulty of getting paint into the spaces of the automobile radiator, this part of the car is often neglected. The appearance may be much improved by painting it with black liquid shoe-polish diluted to the proper consistency. Use the dauber fastened to the stopper for applying the polish.

MAKES BETTER FARMER

Every time I see one of our people driving into town with his auto, says one dealer, I know that man is a better farmer because he keeps a car. And it nearly always proves to be true. He can get along with one less horse and he can make better time when he has to go to town.

AUTO IMPORTS

Canada was the largest individual importer during 1918 of passenger automobiles from the United States, taking 8,543, valued at $7,141,405, as against 4,377, valued at $5,445,052 in 1914. Australia, which was the second largest importer, took less than half as many American automobiles as did Canada.

EASY RIVET REPAIR

In case a rivet in the frame or other location is found to be broken, a very acceptable repair may be made by running a bolt through the rivet hole and clinching it with a nut on the other end.

A FLOODED CARBURETOR

When the carburetor develops a habit of flooding and it is found the float has sprung a leak this condition may be remedied by first enlarging the hole and emptying out all the gasoline, an operation that is assisted by warming the float a little.

FIND SHORT CIRCUIT

When two of the wires of the lighting or starting systems are producing a short circuit an inevitable accompaniment of the condition is heat. By feeling carefully along the line the operator can usually detect the presence of a short by the heat that is being generated.

APPLYING THE CHAINS

Anti-skid chains must not be applied tightly to the tires, as so many car owners do to eliminate the clinking of the loose chain against the fender. Tight chains cut the tire badly. Further, the chains should be inspected at frequent intervals and any cross links that have become worn or have developed sharpness should be replaced.

CLEAN PLUGS OFTEN

Spark plugs require cleaning occasionally, especially since motor fuel became the debased liquid it now is. The proper way to take the plug apart and get all the black carbonized oil and dirt away from the junction of metal and porcelain. The porcelain must not be roughened with sandpaper or a file, as this makes it more likely than before to accumulate carbon. The points should be brightened with emery cloth and the rest of the plug be treated with gasoline and a brush.

VACUUM TANK HINT

In the vacuum tank, when it is necessary for any reason to dismantle the device the head may be taken off by removing the screws around the edge of the cover. There is a gasket placed between the head and the body, and the utmost care must be taken in handling, because if the gasket is not absolutely tight, leakage will result and the operation of the system will be impaired.

WATCH TRUCK SALES

Trucks are not only being used to haul livestock and grain but all kinds of farm produce, and the motor is rapidly crowding the horse to the discard. The increase in the number of trucks sold to farmers in the States this year has been very great and dealers are looking forward to a prosperous season. Wherever there is a truck sale in your territory be ready with a likely repair part for it and it might pay to send the purchaser a letter telling him of your service.

Make Us Your HEADQUARTERS!

Turn your garage into the local accessory station. MILLIONS OF DOLLARS will be spent in Canada this year for automobiles and automobile equipment. The Canadian West to-day is **Richer** than ever before—**Richer in Liberty** and **in money.** The demand of a Prosperous nation for more luxuries of life will be greater than ever. The automobile has become one of the pleasures and necessities of the average man. Many of these auto owners live in your locality; they must have these supplies, and if they can't get them from you, they will buy from the mail order houses. **Wise Dealers** are alert to this most opportune time for competitive business; they know that during prosperous times competition is keener than ever. That is why we make this appeal to you to **MAKE US YOUR HEADQUARTERS.**

We are stragetically situated—the world's accessory markets are at our elbow; we are constantly in touch with everything that is new and of interest to our customers. Our ever-increasing chain of customers stretching over the entire Dominion involving thousands of dollars worth of business enable us to purchase in immense quantities, thereby securing the lowest possible prices, and we in turn turn these goods over to our friends at prices that cannot be equalled.

WE DEFY COMPETITION. We want your business now more than ever. In order to get your business we offer you three things that you cannot get combined elsewhere. They are:

FIRST—the highest quality merchandise. **SECOND**—our unequalled six-hour service. **THIRD**—the lowest prices consistent with the quality of goods.

WRITE TO-DAY for **"MOTOR SNAPS,"** our little salesman, a paper crammed full of Accessories, Tires, Parts for Ford Cars, at remarkably low prices.

REMEMBER, "CROWN CUSTOMERS ARE SATISFIED CUSTOMERS."

CROWN CYCLE & MOTOR CO.

EXECUTIVE OFFICES

319 Craig St. West - Montreal

Shaw's Auto Salvage Parts Supply Co.

923-927 Dufferin Street, Toronto

PHONE JUNCTION 3384

An efficient service intelligently rendered on all used parts.

GEARS, MAGNETOS, RADIATORS, SHAFTS, SPRINGS, CARBURETORS, BEARINGS, LAMPS, WHEELS

"ALL SERVICEABLE" *NO JUNK*

Correspondence Solicited. Inspection Invited

Prompt Deliveries. Money Back Guarantee. No advance in Our Prices. Largest Stock in the Dominion. No sending of Wrong Parts is convincing enough for you to *Wire, Write or Phone*

Shaw's Auto Salvage Parts Supply Co.

923-927 Dufferin Street, Toronto

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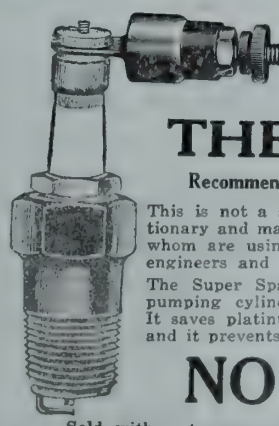


In position

ENDS SPARK PLUG TROUBLE--PROLONGS THE LIFE OF THE SPARK PLUG

THE SUPER SPARK

Recommended by the National Ford Owners Club of New York

This is not a spark gap, but a nitrogen transformer for tractor, stationary and marine engine users, as well as for motorists, thousands of whom are using it with perfect service. Recommended by university engineers and practical technicians.

The Super Spark effectually prevents the fouling of plugs by oil pumping cylinders. It enables broken porcelains to work perfectly. It saves platinum and breaker points from burning and eating away; and it prevents burnt-out coils and punctured condenser.

NO
More Engine Missing
More New Plugs
More Cleaning Plugs
More Carbonized Plugs

Sold with a two-year guarantee. Price $2.25 each; or $9.00 for a set of four.

Super Spark Co. of Canada, 31 SIMCOE ST. OSHAWA, ONT.

Eastern Distributor: VLIT MANUFACTURING CO., 223 McGill St., Montreal

Western Distributor: SHELL SUPPLY CO., Winnipeg, Manitoba

Exclusive Representatives Wanted for Counties and Townships

SPECIAL TRIAL OFFER!

This ad and $1.50, mailed or presented to Oshawa office only, entitles holder to one Super Spark with full instructions.

J

Selling a Recognized and Profitable Line

Everywhere implement dealers are making good, especially those that handle farm implements that have won the farmer's confidence. Our implements have stood the hardest work and for years we have manufactured farm implements which have carried the greatest praise from the farmers.

This means that when you handle a line that creates confidence you profit thereby, and now is your chance to procure an agency that will build bigger and better business.

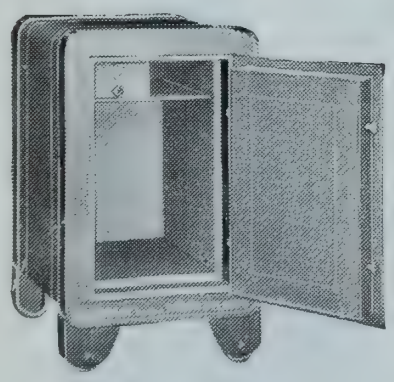
Peter Hamilton Farm Implements

The Peter Hamilton Cultivators have a unique construction that adapts them to varying conditions and the hardest kind of work. We manufacture spring tooth and stiff tooth cultivators, scufflers, harrows, mowing machines, rakes, blowers and cutters. Every one is of durable construction and built to meet the demand of the heaviest work.

Write now, there is open territory for good dealers.

The Peter Hamilton Company Limited

Peterboro, - Ontario



A safe place for Victory Bonds and Sales Notes, etc.

Farmers—No More Lost Papers!

There can be no security unless certain assurance of safety is provided for your valuable papers and documents.

Our real Made-in-Canada household fire-resisting steel cabinet, with combination lock gives this protection. Every farmer should have one.

This is a splendid chance for implement dealers—write for prices and full particulars at once.

J. & J. Taylor, Limited

TORONTO SAFE WORKS

Toronto, Canada

GRINDERS FOR TRACTOR POWER

"RAPID-EASY" GRINDERS

have set and are constantly maintaining a distinctively high-quality mark.

The Best for Your Trade

STYLE D CUSTOM MILLS

are particularly well adapted for Tractor Power. Four sizes

$9\frac{3}{4}$ in. $10\frac{1}{2}$ in. 11 in. 13 in.

Compared with other Grinders and tested for Operating Efficiency—number of days of active service,

The "RAPID-EASY" is AN EASY WINNER

Write for Illustrated Folder

J. FLEURY'S SONS

Aurora, Ont., Canada

MOST WORK, LEAST POWER, BEST QUALITY

I. H. C. CHANGES

Thirty thousand International Harvester employees held elections Wednesday, March 12, at the seventeen American and three Canadian plants upon the company's proposed "Harvester Industrial Council" plan of employee representation. The balloting was secret, and the vote at each plant decided the adoption of the plan.

The introductory articles of the plan state its purpose to be the establishment of the relations of the employees and the management "upon a definite and durable basis of mutual understanding and confidence."

This plan was submitted in full detail to every employee in each of the plants. It is founded upon recognition by the company's directors and officers of the fact that labor is entitled to a voice with the management in shaping the conditions under which labor shall work. The officials declare it to be a progressive development of the company's industrial policy which has heretofore found expression in the inauguration of the weekly pay system and the basic eight-hour day, and still earlier in the voluntary adoption of a workmen's accident compensation plan ante-dating American legislation on that subject, as well as the Harvester pension plan, wholly supported by the company, under which 523 employees have been retired on pensions; also the Employees' Benefit Association, which, in ten years, has paid out more than $3,000,000 to employees and their families.

The outstanding feature is the organization at each plant adopting the plan of a Works Council for consideration and recommendation to the management as to working conditions, health, safety, hours of labor, wages, recreation, education and other similar matters of mutual interest.

This council varies in size according to the number of employees, but no plant shall have less than five employees' representatives, nor shall the management representatives ever exceed the employee representatives in number. Employee representatives are to be freely nominated and elected by the employees from voting divisions so arranged that all departments and crafts shall be fairly represented. The management representatives are to be appointed by the management.

The group of representatives are to have equal voice and voting power in the council and are to vote separately under the unit rule, so that a majority of either group shall determine that group's attitude.

Any employee or group of employees may at any time present suggestions, requests or complaints to the works council, either personally or through an employee representative, and shall have the right of appearance before the council for personal discussion. It is provided, however, that there must have been an opportunity for the plant management to settle the matter before it is acted upon by the council.

Foremen, assistant foremen or others having power of employment or discharge cannot vote at employees' elections nor serve as employee representatives. Every employee representative is guaranteed the fullest independence of action as such, including the right of direct appeal to the president of the company, and, if his ruling be unsatisfactory, to arbitration.

Findings of the works council shall be transmitted to the superintendent for execution. If the matter is deemed of such importance as to require executive attention, the superintendent will refer it to the president of the company who may instruct him to put it into operation or may either discuss and settle the matter with the works council or refer it to a general council summoned from all plants concerned, or by mutual consent may refer it to arbitration.

If the works council cannot agree upon a question it shall be referred direct to the president, and if he is unable promptly to present a settlement satisfactory to the employee representative he may either put it before a general council or it may be referred, by mutual consent, to disinterested arbitration. If the president and the employee representatives of a works council or general council are unable to agree on an arbitrator, each side shall select an arbitrator, and if these two are unable to agree they may appoint and call in a third arbitrator, and the decision of a majority shall be conclusive. Findings reached by a general council or by arbitration shall be binding upon all concerned. The basis of representation as to general councils shall be approximately one representative to each thousand employees, but no works shall have less than two council representatives.

It is expressly provided that there shall be no discrimination under the plan against any employee because of race, sex, political or religious affiliations or membership in any labor or other organization. The company agrees to provide, at its own expense, suitable meeting places for works councils or sub-committees and to pay regular wages to employees absent from work as representatives or witnesses in works councils. It also undertakes to pay reasonable travel and maintenance expenses of employees serving on general councils.

While, as stated, the Harvester Industrial Council plan is a progressive development of the company's industrial policy, it exhibits some marked advances beyond similar systems now operative in the United States. Perhaps its most advanced feature is the frank inclusion of wages and hours of labor in the scope of the council's activities; there are no reservations against any matters of mutual interest pertaining to working conditions.

Other such plans, in the main, aim to provide chiefly means of communication between employees and management, while the Harvester plan gives definite and equal representation and voting power in the councils and opens them to all employees.

Another distinctive feature is the provision for recesses of works and general councils to permit private conferences of employee representatives among themselves or with the plant councils which they represent. The provision for recall by employees of unsatisfactory employee representatives is also unique.

The plan departs from existing theory and practice by placing no length of service restrictions upon the employees' right to vote. Generally such plans require at least three months' service before the employee is entitled to vote. Another useful provision calls for terms of one year for employee representatives, but for elections of half the representatives every six months, thereby preserving the continuity of the council.

An important clause is that which differentiates between the shaping of policies and their execution, the former being the function of the works council and the latter of the management, with the right, however, to have the manner of execution reviewed by the works council.

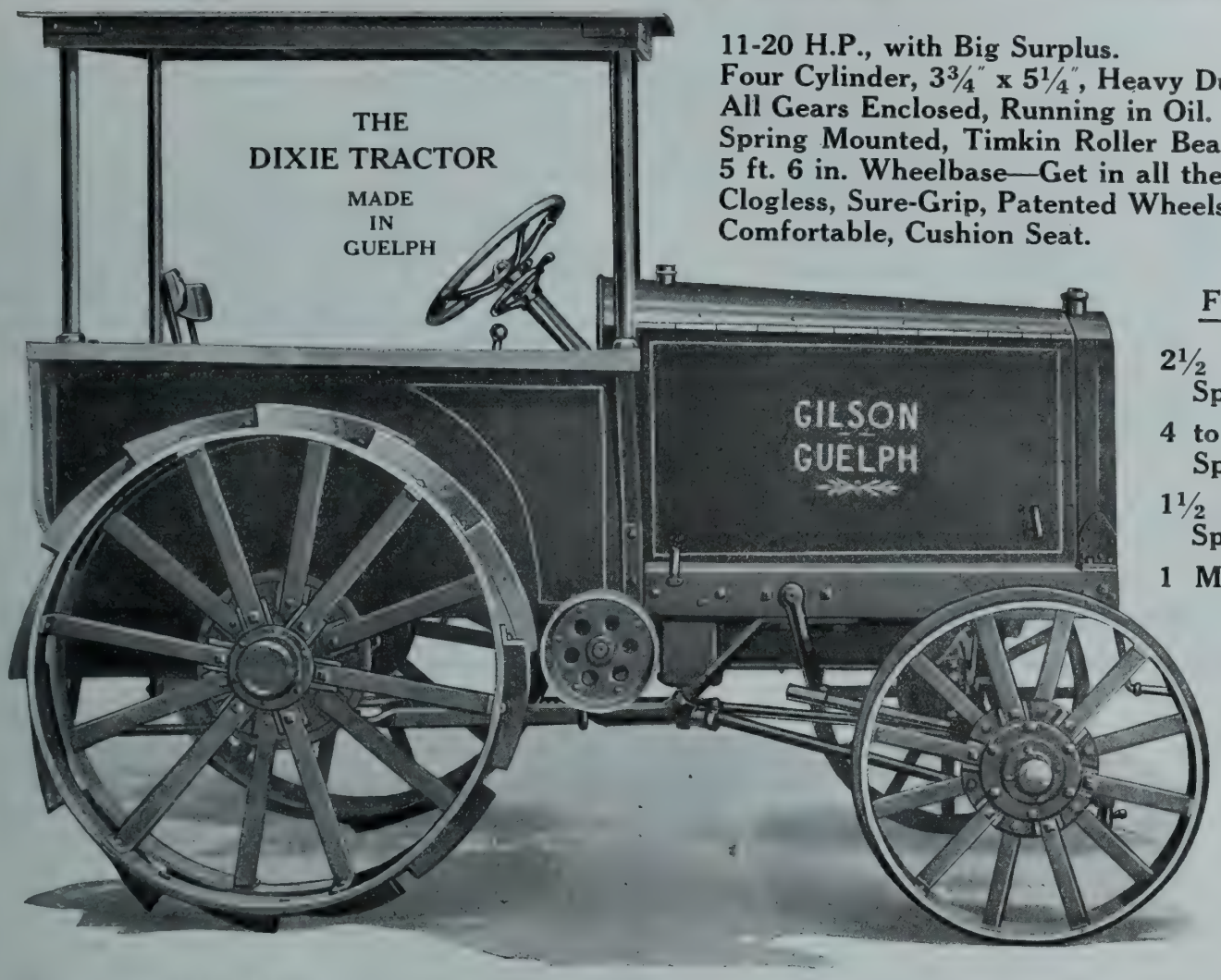
Likewise the plan makes it clear that before any suggestion, request or complaint can be considered and acted upon by the works council it shall have been duly presented to the management. The secretary of the council is charged with the duty of learning whether this has been done, and if not he is to lay it forthwith before the management. In this way it is possible to avoid waste of the council's time upon matters which can be and ought to be readily settled by the management. At the same time the plan provides an expeditious means for securing management attention for any question raised by any employee.

A Bonanza for the Live Dealer

HERE IT IS!

The Latest and Greatest Tractor Success

THE NEW LIGHT WEIGHT "DIXIE-ACE"



11-20 H.P., with Big Surplus.
Four Cylinder, 3¾" x 5¼", Heavy Duty Motor.
All Gears Enclosed, Running in Oil.
Spring Mounted, Timkin Roller Bearings throughout.
5 ft. 6 in. Wheelbase—Get in all the Corners.
Clogless, Sure-Grip, Patented Wheels.
Comfortable, Cushion Seat.

FOUR SPEEDS

2½ M.P.H. Plowing Speed
4 to 5 M.P.H. Road Speed
1½ M.P.H. Low Speed
1 M.P.H. Reverse

PATENTS APPLIED FOR

The new "DIXIE-ACE" is perfectly adapted for all field, road and belt work. No farm is too small—no farm too large. Every farmer is a prospect.

Its sensible, sturdy, compact and graceful design—its greater range of usefulness—its outstanding quality—its beautiful finish—and its convenience and all-round serviceability make this tractor the biggest seller and the best value on the market. It has more solid, service, selling features than any other tractor. The consumer falls in love with it at first sight.

We have a few choice territories not yet covered. If you can handle big business and want to be the leading power merchant in your territory, *write us at once*. You can see the immense possibilities of the proposition—agencies are commanding a premium—*DO NOT DELAY!*

OTHER MONEY MAKING GILSON PRODUCTS

"Goes Like Sixty" Gasoline and Oil Engines from 1¾ to 16 H.P.
The Wonderful Gilson Silo Filler—"The Lightest Running Blower Cutter Made."
The Hylo Silo—One of the Biggest Money-makers You Can Handle.
The Light Running Gilson Thresher—For the Individual or Syndicate.
Gilson Feed Grinders—Wood Saws—Pump Jacks—Pulleys—Belting, etc.

GILSON MFG. CO., LTD.,

Dept. D.A., Guelph, Ont., Canada
Dept. D., Winnipeg, Man., Canada

Mr. Dealer!

IF

Price
Quality of Material
Workmanship
Close Skimming
and
Easy Turning

are considered by your customers in buying a Cream Separator, then we claim that the

Sanitary King

is the best buy in Canada to-day. Write for prices and terms.

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King Separator Works of Canada
Limited
Bridgeburg or Whitby, Ont.

You Returned Men on the Farms

And particularly those of you who, for the present at any rate, are unable to do heavy work.

We can show you how to make from $100 to $500 a month—for others are actually doing it right now, representing MACLEAN'S MAGAZINE and FARMERS' MAGAZINE.

Lose No Time!
Sign the Coupon Below.
Mail it to Us NOW.

THE MACLEAN PUBLISHING CO.,
143 University Ave., Toronto, Ont.

I am a returned soldier, and saw service in ..... Please write and explain to me your plan of making money.

Name .....

Address .....
(If wounded, or incapacitated, attach a letter to this coupon, giving full particulars.)

AN ENGLISH "FLIVVER"

A despatch from London, England, says that an English firm has made arrangements to put on the market a small light car which will cost less than the new Ford (about £50 or £60 in the home market.)

The British car will be something quite new. Hardly any wood will be used in its construction. It will be made almost entirely of a new substance—a kind of concrete, light, but strong and durable, produced from waste materials, such as slag, clinkers, sawdust and so on, and covered with a metal solution.

The present low price of this waste material, which is a product of war, is one of the secrets of the car's cheapness. Another secret is the method of construction. The various parts, including the wheels and chassis, will be stamped out—each complete in one piece—by powerful machinery and simply fitted together.

THE TRACTOR'S FUTURE

"I venture to predict that within a period of five years we will have inter-city truck freight service, which will maintain an average speed of twenty miles per hour and that the type of truck will be a tractor with semi-trailer—the tractors serving or operating within their own zone of 100 to 150 miles and the trailers running through to destination.

"Standardization of mounting semi-trailers on tractors should be sought and have a very definite place in the minds of progressive truck engineers of to-day, the dominating feature of which must be, adequate length or wheelbase of the tractor so that ample space is provided for centralizing, over the rear axle of the tractor, at least 50 per cent. of the trailer load. Too much load on the trailer axle makes for difficult handling and a consequent loss in road speed. For this reason, legs or jacks are of little value as a means of support when changing trailers.

"The semi-trailer will not be used, except in special cases, other than on the long runs, trucks of the conventional type will act as pick ups and deliver the freight to the terminal houses where the trailers will be loaded and dispatched. This will save time and reduce the total investment to an economic point."—C. L. HALLADAY, *Chief Engineer National Automobile Chamber of Commerce of the United States.*

DURANT IN SPOTLIGHT

In a recent issue "Automobile Topics" had the following to say regarding the Samson tractor and its future:

W. C. Durant again has shouldered his way into the spotlight by an unexpectedly prompt disclosure of his tractor programme, which is rendered remarkable in the offering of a three-plow machine at a highly stimulative price of $650. Low-priced tractors, of course, have been in the wind for some time, and it had been expected that it would not be long before there were offered in large quantities machines selling as low as $500. That Durant, with the big General Motors organization behind him, would go after Henry Ford hard, was also assumed, both from a knowledge of the circumstances and a knowledge of the man. That he would seize a moment of postwar uncertainty, when Fordsons were selling at $885, to enter a bid so far below the existing competition, however, was rather more than had been expected.

Maybe Adam Laughed at These!

Another on "Henry"

Pat—"Did you know my brother painted his Ford red?"

Mike—"No, what did he do that for?"

Pat—"Well, there is a law now that all tin cans containing gasoline have to be painted red."

* * *

Some Tie!

"I am looking for a cravat that will harmonize with a yellow monoplane, something not too loud in color, that will be effective at a height of sixty or a hundred feet."—London *Saturday Journal.*

* * *

His Quietus

Mrs. Cobb—"Was the grocer's boy impudent to you again when you telephoned your order this morning?"

Maid—"Yes, Mrs. Cobb, he was that; but I fixed him this time. I sez, 'Who the hell do you think you're talkin' to? This is Mrs. Cobb.'"

* * *

A Missing Switch

"Aren't you ready, dear?" called the husband from downstairs.

"As soon as I fix my hair, Henry," came the reply.

"Haven't you fixed your hair yet, for gracious sakes!" came from Henry an hour later.

"Fixed it?" shouted back the feminine voice. "I haven't found it yet!"—Pittsburgh *Chronicle-Telegraph.*

* * *

He Should Have "Zigged"

Not very long ago a chauffeur was brought up after having run down a man.

"You struck this pedestrian, and he was seriously injured?" the judge asked.

"Yes, sir," replied the chauffeur.

"Why didn't you zigzag your car and miss him?"

"He was zigzagging himself," said the chauffeur, "and happened to zag at the same time as I did."

* * *

Pleasant Dreams

The section foreman sent one of his men to the car for a tamping bar. The man failed to return and after a decent interval the foreman went to see what was the matter. He found the man fast asleep under a tree.

Eyeing him with a stern smile the foreman said: "Slape on, ye idle spalpeen—slape on; while ye slape, ye've got a job, but whin ye wake up ye're out of wurrk!"

* * *

Her Bashful Beau

An intensely bashful young man was driving one evening with a young lady whom he had been calling on for some time previous. The stillness of the evening and the beauty of the scene around him inspired his courage, and, sitting stiffly erect and with his face forward, he asked suddenly, "May I kiss you?"

"Surely," she coyly replied.

"Aw," he said, his face scarlet, and stepping on the accelerator—"aw, I was only fooling."

* * *

A Gambling Interest

"Two soldiers in the sloppy trenches in France were sitting some distance apart, but they could communicate by telephone. 'All right, Bill?' 'Yes, all right, old chap.'

"The barrage increases. 'All right there, Bill?' 'Yes, old chap.'

"The barrage increases again. Third time. 'All right, Bill, old chap?' 'D—n it all, why on earth do you take such an interest in me?' 'Well, we've got a 'sweep' on at this end, and I've drawn you as first casualty.'"

SERVICE STATIONS ONLY

By a decision recently delivered by Justice Masten in a Toronto court, in deciding a suit against the Canadian Oil Company, Ltd., it is stated that unless the Legislature changes the wording of the statute under which municipalities are permitted to license "public garages," the buildings erected for the supply of gasoline and air, where there is no accommodation for housing automobiles, may continue to be operated without a license. The judge decided that a "garage" is a place where motor cars are hired or kept, or used for hire, or where such cars, gasoline, oil, or other accessories are stored, or kept for sale.

AERO ENGINES

Many people who are not thoroughly conversant with the subject have expected, and even asserted, that the aeroplane engine could be used in automobiles to a large extent, and with very desirable results. This is not feasible for a number of reasons: the aeroplane engine, owing to its overhead valve gear and its relatively loose fitting, is decidedly noisy; carburetion in the aeroplane engine is such as to afford a too limited degree of flexibility; and, in addition, the aeroplane engine must be treated like a sick baby, getting the most expert attention at frequent intervals, so that only the best of mechanics would be capable of looking after it.

ONLY 7% BUILT

H. L. Horning, former chairman of the automotive products section of the United States war industries board, in an interview in the press recently, said that less than 7 per cent. of the tractors needed by the American farmers have yet been built. Mr. Horning believes that there is no load that can possibly affect any first-class engine.

GARAGE JUDGMENT

J. H. Karn, of London, Ontario, whose automobile was destroyed by fire in the Ontario Garage Motor Sales Company Limited, London, has lost the suit which he brought against the company and against S. W. Nicholas of Windsor, for $1,000 damages. Mr. Nicholas, in backing out of the garage, punctured his gasoline tank against the door, and the result was that the building was destroyed by fire, along with some 30 automobiles. Justice Kelly has dismissed the case, finding that the garage was built and operated in strict compliance with all regulations. His view is that the fire was accidental and not the result of negligence on the part of Nicholas or of the Garage Company.

AUTOS AND THE O.T.A.

As a result of the convention held recently in Toronto of the Ontario Retail Automobile Garage and Accessory Dealers, a demand will be made upon the Ontario Government to change the present clause in the Ontario Temperance Act by which any automobile found containing liquor may be confiscated. It is pointed out that any such car may have been rented from a reputable motor firm, quite innocent of wrongdoing.

MONTREAL'S SHOW

The National Automotive Show of Eastern Canada, advertised as the "only motor show in Canada for 1919," commenced in Montreal, April 5, and will continue until April 12. The show manager, T. C. Kirby, reports that all the space at his disposal has been taken by various automobile concerns. Passenger and commercial cars, motorcycles, motor boats, accessories, aeroplanes, tractors and farm lighting outfits are included among the exhibits announced. The show is being put on in Victoria rink, Stanley and Drummond streets.

A GREAT MARKET

THE tremendous market that is now ready for potato growers will be the means of developing great business in the potato machinery line. The farmers will take advantage of this market and will grow larger and larger acreage of potatoes. Last year Canadian farmers produced 105 million bushels of potatoes. Think what this means to the dealer in Potato machinery —every farmer is a Prospect for one of our lines. A wonderful opportunity for good line dealers.

These machines have proven their efficiency in actual tests and in the heaviest yielding potato fields in Canada.

The O-K Canadian Potato Planter

gets the planting done right without seed waste and in a fraction of the usual time. It is the only planter with the endless cup dropping device — the most accurate system ever invented. Besides, it has equipment for correct depositing of fertilizer. Write for contracts to handle this live-wire line.

The O-K Spra

appeals not only to farmers and fruit growers for all kinds of spraying, but to motor car owners, decorators, etc. It is great for spraying potatoes, shrubs, trees, vines, bushes, for disinfecting barns and hen coops and for applying oils and washes to stock.

Every dealer should have a good stock of the O-K Spra handy. Its special curved lance gets the spray into the out-of-the-way places. The efficient non-clog nozzle, with thimble-shaped strainer, requires less attention than any other nozzle. These two points alone **clinch the sales!**

O-K Canadian 2-row Sprayer

Here is a real ready seller and a wonderful time-saver. It works like a charm in the field, being operated like a wheelbarrow, and just as easy to push between the rows. It reaches two rows at a time and there is no stopping for readjustments once it is set for width of rows. The discharge pipe can be detached for spraying trees. Tank holds 8 gallons. Write for selling proposition and literature.

Canadian Potato Machinery Co., Limited

No. 36 Stone Road, GALT, ONT.

JUMBO BRAND

Made in WESTERN Canada

Sheet Metal Products for the Farm

Excel in *MATERIAL—WORKMANSHIP—SERVICE*

If you would have a complete equipped farm you will want a "Jumbo" Gasoline Wagon Tank with welded joints all ready to set on your wagon gear.

A "Jumbo" Gasoline Storage Tank for either underground or surface.
"Jumbo" Stock-watering Troughs, Water Storage Tanks or Wagon Tanks.
"Jumbo" Metal-clad Implement Shed and Garage.
"Jumbo" Metal Roofing, Siding and Metal Ceilings.

AND IF YOU RUN A FORD CAR---You will want a FORD POWER TRANSMITTER for anywhere.

Write us for prices and illustrations on any of these lines.

CROSSEN METAL WORKS

BOX 3054, WINNIPEG, MAN. **Limited**

FACTORIES AT ST. BONIFACE, MAN., and REGINA, SASK.

Farmers' Magazine helps you sell Farm Equipment

Read FARMERS' MAGAZINE regularly. Read the tractor pages, the interesting material on power farming, the use of modern equipment—see how we urge the use of more machinery.

FARMERS' MAGAZINE has done more to put tractors on Canadian farms than any other Canadian farm publication. Every month it helps farmers solve their problems. It sends farmers to you to make purchases—it helps you build a bigger business.

Co-operate with FARMERS' MAGAZINE

Read the advertising pages regularly. Make a note of the products advertised therein. Stock them—push them, because it takes less time to sell the products your customers have seen advertised in FARMERS'. The advertising in FARMERS' increases your turnover—your profits.

No matter how busy you are it will pay you to read FARMERS' from cover to cover—it will keep you in close touch with the plans of farmers.

The cost of a year's subscription to FARMERS' is only $1.50 per year—24 issues. Send your order to-day—it's a mighty fine investment.

FARMERS' MAGAZINE

Canada's National Farm Magazine

143-153 University Avenue Toronto, Canada

Dairy *and* Household Supplies

POWER

Why are the women and their needs overlooked by many farmers? It is not uncommon to see a six-cylinder car parked near the home, ready for a pleasure or business trip. But back in the kitchen or down in the basement, the women folks are busy over the washtubs and boilers at least one day in the week, while another day is spent in ironing the clothes, and finishing up the family washing.

About the only reason for the disproportionate division of labor-saving devices is that the man is thoughtless of his wife's health and happiness, while the woman has long since ceased to dream of things which will lighten her labors.

There is many a prospect for the sale of a washing machine and other washday back and step savers in the country towns and out on the farms, if the dealers would but take pains to hunt them out. But too few dealers think of catering to the housewife's needs and desires. A retailer will look with pride at the advertisement of a walking plow or a disc harrow, but seldom does he use the columns of the local papers to tell the wives of his patrons about a hand washer, or one that operates by power.

It can't be that such a dealer overlooks the profit there is in the sale of a washing machine, because there is probably more clear money in the sale of a hand or power washer than there is in delivering a walking plow or a harrow. And certainly there is just as much need for the former as for the latter.

SILOS WILL BE BUILT

In many parts of the country there are going to be more silos erected this summer. There are so many things that can be ensiled besides corn, that farmers who are really on to their job are going to put up silos. Keeping a weather eye on the needs throughout his district often enables a dealer to land the sale of a wood silo or even a hollow tile silo. There ought to be extra money picked up this way.

A STANDARD DAIRY MANGER

A standard dairy manger has been developed by the United States Department of Agriculture. The need of such a standard has been apparent for some time. Thirty-five firms which make and sell equipment for dairy barns manufacture mangers of similar design and construction except for minor modifications. Each manufacturer turns out a design just a little different from those of his competitors. Cement associations and lumber associations have also developed special designs. At little expense and trouble, all these mangers could be standardized and made uniform. After a careful study of the existing mangers the division of rural engineering of the Department of Agriculture learned that the better forms, which have been successfully used for years, were so nearly alike that there is no valid excuse for not adopting a standard. Popularization and use of such a manger would be equally advantageous to manufacturers and to dairymen.

Successful dairymen agree that in order to get best results cows must be fed separately. This is usually accomplished by using manger divisions which are made removable or hinged so as to facilitate cleaning the manger. Their use is rapidly increasing, and the standardization of mangers will undoubtedly result in a similar standardization and improvement of the divisions.

Some companies furnish manger templets or patterns to their customers in order to avoid mistakes in measurement and to aid in construction. They are prepared to furnish templets for each of their different forms of mangers. The universal use of the proposed manger would avoid mistakes made in sending wrong templets which cause delays and misunderstandings. With one set of templets, the builder is able to make a manger suitable for the requirements of the dairyman, and can build a barn for any equipment. As a consequence the contractor can use better forms, do better work, and reduce the cost.

The advantages in the adoption of such a standard by the manufacturers are that it permits the use of one manger templet; decreases the likelihood of mistakes in constructions, lessens misunderstandings, and leads to the standardization and perfection of manger divisions and ultimately decreases the cost of production.

The present time is favorable for standardizing mangers as all stocks are low because of the scarcity of steel and other war conditions. Manufacturers are said to favor a standard form.

CREAM TESTS VARY

Cream will vary in test from time to time, according to a number of different causes. Among these Hoard's Dairyman cites the following:

1. Variation in the speed at which the separator is being operated and failure to operate it at the correct speed.
2. Variations in the percentage of fat in the milk of various milkings will also cause a variation in the cream test. Low testing milk will skim a thinner cream than a rich milk. The addition of fresh cows may change the test of the milk in the herd. A dry season will sometimes decrease the milk flow and increase the test, and so with other causes which will operate to change the test of the milk from the entire herd. There is also a seasonal variation in the test of milk that is liable to be reflected in the cream test.
3. Variation in the temperature of the milk when being skimmed. Lowering the temperature causes a thinner cream and milk should not ordinarily be separated that is under 75 degrees F.
4. The rate at which milk is fed into the separator is also important as the under-feeding of milk will cause an increase in the test of the cream.
5. The amount of skimmilk or warm water used in flushing the bowl of the separator will also affect the test.
6. Improper sampling of cream and failure to do accurate work in testing are not excusable, but this will, of course, cause a variation in test. The man who does the sampling and test ng should be both honest and capable.

MILKING MACHINES PROSPECTS

Labor conditions on Canada's farms this year are worse than last year. The dairy business continues to be good. A recent pamphlet of the Department of Agriculture gives an encouraging forecast of the dairy industry and suggests that the outlook is sufficiently promising to warrant farmers in maintaining or even increasing their herds. Records show that although dairy cattle have increased little in number during the past year, there was no widespread slaughtering of cattle as some persons had feared. The department report accords with a general feeling of optimism regarding the dairy business, which should be encouraging to the dealer who handles milking machines. If the dairy business increases and the price of labor continues high, the sale of mechanical milkers will undoubtedly expand.

THE NAME THAT STANDS FOR QUALITY AND SERVICE

JOHN DEERE

WELLAND, CANADA.

THE TRADE MARK OF QUALITY
MADE FAMOUS BY GOOD IMPLEMENTS

A COMPLETE LINE OF PLANTING MACHINERY

THAT ASSURES

EASY SALES—SATISFACTION—LARGER PROFIT

FOR

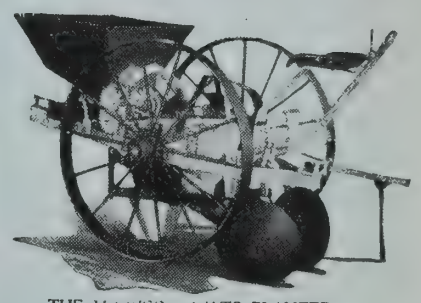
JOHN DEERE DEALERS

MACHINES THAT HAVE MADE THEIR WAY—BY THE WAY THEY ARE MADE

JOHN DEERE No. 999 CORN PLANTER

JOHN DEERE BEET AND BEAN PLANTER

JOHN DEERE-VAN BRUNT DRILL



THE HOOVER POTATO PLANTER

JOHN DEERE IMPLEMENTS HAVE BEEN ON THE MARKET FOR OVER FIFTY YEARS

WE CORDIALLY INVITE CORRESPONDENCE AND INQUIRIES FROM EVERY LIVE IMPLEMENT DEALER IN ONTARIO
WRITE FOR OUR 1919 CONTRACT AND BEAUTIFULLY ILLUSTRATED FOLDERS ON EACH OF OUR MACHINES

JOHN DEERE MANUFACTURING COMPANY, LIMITED

WELLAND — ONTARIO

MR. IMPLEMENT DEALER!

SELL

Buchanan's Cow Stalls, Stanchions, Haying Tools and Water Bowls

TO THE FARMERS

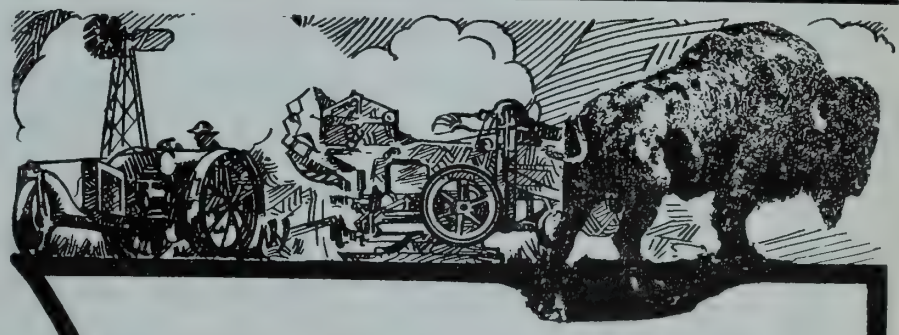
and you will make them satisfied customers.

Buchanan & Co. offer you attractive discounts and give their Agents good treatment always.

Write for terms and prices to

M. T. BUCHANAN & CO.

Ingersoll - Ontario



MADE IN CANADA

BUFFALO OILS

Quality Oils for Every Farm Purpose

You cannot get the best results in your machinery operations unless you use **quality** oils and greases. The quality of BUFFALO OILS has been thoroughly proven —they are Western Canada's favorite brand.

There's a Buffalo Oil or Grease to meet every requirement of the farm. Put them to the test.

BUFFALO OILS INCLUDE

Automobile Oil	Gasoline Burning Oils
Tractor Oil	Transmission Greases
Gas Engine Oil	Cup Grease
Steam Cylinder Oil	Crank Pin Grease
Machine Oil	Graphite Grease

PRAIRIE CITY OIL CO., LIMITED

Winnipeg - Manitoba

STEFANSSON'S
OWN STORY *of his*
FIVE YEARS *in the* ARCTIC

Over five years ago Vilhjalmur Stefansson, the famous Arctic explorer, was commissioned by the Canadian Government to lead a party into the uncharted space that extended from the north-westerly boundaries of Canada on to the North Pole. Shortly after the party got away the news came back to civilization that Stefansson and some of his party had drifted out into the Arctic seas on an island of ice and they were give up as lost. But Stefansson came back, safe and sound after four years of amazing adventures, during the course of which he made many discoveries of scientific and geographical value. Mr. Stefansson has written his story of this wonderful journey, and exclusive Canadian rights have been purchased by MACLEAN'S MAGAZINE. It starts in the April issue and will continue for six months. It is a thrilling narrative—unquestionably the most important Canadian story of the year.

Other Outstanding Features of April MacLean's

"Imperial Relations Must be Worked Out," by Viscount Bryce. An important announcement on the future construction of the British Empire.

"Reconstruction in Turkey," by Stephen Leacock. A humorous article on the present condition of things in Turkey as seen by Canada's great humorist, and applied to Canadian conditions.

"Bulldog Carney," by W. A. Fraser. A splendid novelette of the Canadian West, complete in this issue. Illustrated by Charles L. Wrenn.

"Opening the New Book," by J. K. Munro. An article on the situation at Ottawa created by the new Liberal leadership—smashing, impartial, fearless.

"The Sun Gazer," by Charles G. D. Roberts. A remarkable animal story. Illustrated by Arthur Heming.

"Canada's Fishmonger General," by Thomas M. Fraser. An article on a young Canadian who put Canadian fish on the diet of the British armies by a series of Barnum and Bailey advertising stunts.

"Bombing the Boche," by Lieut. J. Vernon Mackenzie. The second of the two articles that Mr. Mckenzie has written on the whirlwind campaign of raid reprisals which so frightened all Germany.

"The Transformation," by Frederic S. Isham. Illustrated by Hanson Booth. The second instalment of this sparkling new serial.

"Man and Wife," by C. W. Stephens. Illustrated by R. M. Brinkerhoff. The first instalment of a three-part story of Canadian life by a new Canadian writer—a delightful love story with a background of business intrigue.

Is Prohibition Pendulum Swinging Back?

One of the outstanding features of MACLEAN'S each month is a digest of the opinions of the people of Canada as reflected in the press on the most vital topic of the moment. In the April issue appears a careful and comprehensive summary of published opinion on the prohibition question. Does the country want "bone dry" legislation? Is "moderate" temperance gaining favor? Are provincial referendums favored? These questions are answered by a fair analysis of newspaper comment.

For Young Canadians

MACLEAN'S MAGAZINE is designed to interest all members of the family. It is clean, instructive and all-Canadian and, as such, should be read regularly by the young people. It is necessary that the rising generation should be raised as good Canadians; **see that they get the best Canadian reading matter.** The Stefansson story, for instance, is a document of historical importance and, if read by school teachers to their classes, would be found of distinct educational value. Try this suggestion. A word to parents also: MACLEAN'S is free from any of the questionable features so often found in the magazines of to-day.

The Review of Reviews

The best articles from all publications the world over are selected and condensed for this department. Some of the articles in the April number are:

The Man Behind Bolshevism.
Could German Fleet have been Destroyed?
The Secret Plans of the Allied Command.
Too Much Wilson.
Is the ex-Kaiser Haunted?
Next Government Will be Labor.
New Life of Deposed Princess.
A new Kind of Socialism.
Are We Communicating With Mars?
The Cohort of the Damned.
Has War Wiped Out Disease?
The Red Terror in Russia.
The Sultan Takes Hold.
Some Tricks of the Mediums.

Over 65,000 Canadian Families Buy

MACLEAN'S
"CANADA'S NATIONAL MAGAZINE"

20c PER COPY. $2.00 PER YEAR

A TRIAL!—6 MONTHS FOR $1.00

Tear off here and mail

The MacLean Publishing Company,
143 University Ave.,
Toronto, Ontario.

I accept your offer. I am enclosing $1.00 to pay for MACLEAN'S MAGAZINE for six full months. Please start me off with the big April issue.

Name .....

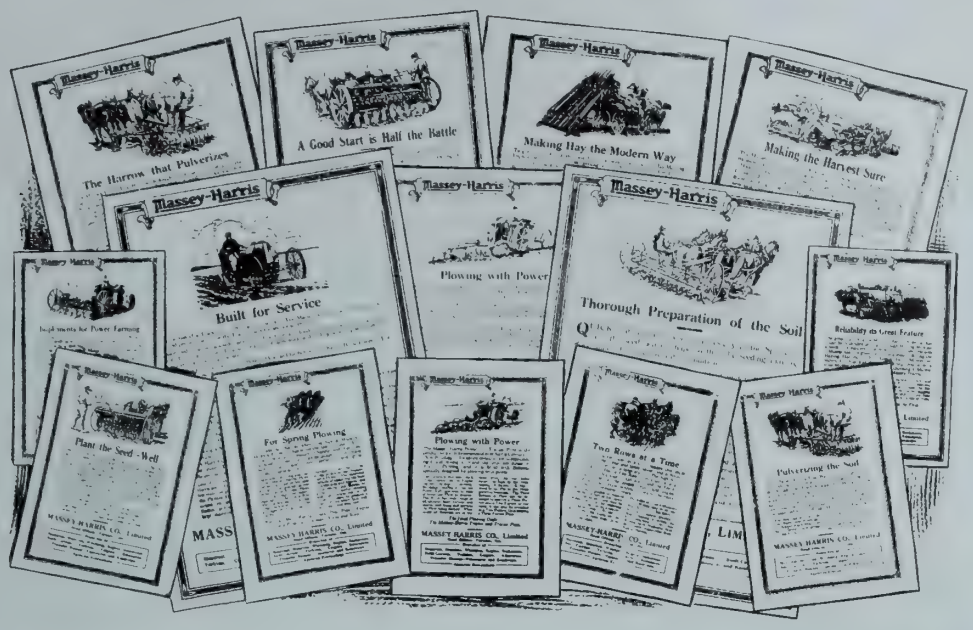
Address .....

F.M.

MACLEAN'S sells for $2 a year—should be more. We want you to get acquainted with MACLEAN'S, for we know that after we once introduce you to "Canada's National Magazine" you two are going to be friends for life. So, to make you known to each other, we will accept your subscription now for only six months to start off with. In other words, we want you to "try out" MACLEAN'S and see for yourself just how good it is! Don't miss this unusual opportunity. Simply sign the coupon, pin a postal note to it, and mail it to us

TO-DAY!

Massey-Harris



Ads that Help the Implement Dealer

THE advertisements reproduced above are a few of a series now appearing in all of the leading Farm papers.

Every Implement Dealer realizes how much easier it is to sell a well advertised line of implements. This is because the "Prospect's" mind has been favorably impressed by reading the ads, and in fact, in many cases, the reading of the ads creates your "Prospect."

This farm paper series, together with our Direct-by-Mail Advertising, consisting of numerous, attractive folders, are a powerful factor in preparing the way for the Massey-Harris Agent and making it easy to sell Massey-Harris Implements.

No need to explain who Massey-Harris is, and what the name stands for. It is known to all farmers and stands for the best in farm implements, and has done so for generations.

Applications for representation in vacant territories should be addressed to the manager of the branch nearest you.

High Quality Implements—Well Advertised

MASSEY-HARRIS CO., LIMITED

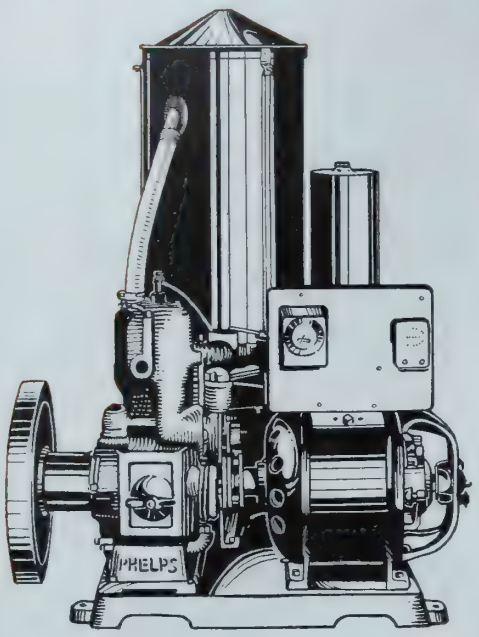
Head Offices—Toronto, Ont.

Branches at

Montreal, Moncton, Winnipeg, Regina, Saskatoon, Swift Current, Yorkton, Calgary, Edmonton, *Transfer Houses*—Vancouver and Kamloops

Announcement!

To Dealers Who Can Sell Good Farm Lighting Plants---



Here it is--Compare it with any other outfit you may know of.

1500 Watts. Self-controlled. Power both direct from engine and from battery. No hand adjustments. Fully enclosed. Big water-cooling tank. Scientifically lubricated.

FARMERS want Electric Light Plants. Over five thousand have already bought in Canada. More would buy if they could get a big rugged reliable plant at a right price. Most plants are too small---Many who have them want bigger ones.

After thorough investigation of all farm lighting plants made we have selected THE PHELPS POWER and LIGHT PLANT upon the recommendation of our consulting Engineer ---Mr. Carl S. Morgan, of the National City Co., New York.

His verdict is that the PHELPS is the most dependable, best designed plant on the market, why?

Because the Phelps Plant is a big capacity plant---twice as big as most plants offered. It is the best plant. Its record proves it. Its simple rugged construction proves it. Its performance proves it.

Power is the great thing on the farm. Phelps has power---enough power to run churns, separators, washing machines, etc., by belt power from a "Power Pulley". The Phelps is the only plant on the market with this important feature. Charges the battery at the same time, if it needs it. That means the battery is always ready to light the house, barn and yard. It means longer life. It means that the Phelps costs less to run.

We stand ready to back Carl Morgan's judgment and OUR merchandising ability by launching a tremendous campaign to market the PHELPS plant.

We want dealers in certain exclusive territories. But we want only men who will recognize this as a real business opportunity—a chance to connect with the big Grace organization (we now have over 130 permanent dealers in Canada)

That means real live wire men—men with a little money plus a lot of selling ability and a keen desire to work HARD.

Note this. The price of the PHELPS plant is a little higher than that of some other farm electric plants.

But the capacity of the PHELPS is TWICE that of the average plant offered to farmers today.

If you can do the kind of selling that calls for---get busy now.

Our advertising campaign is just starting. It's a real one, too--in all the big papers--full pages--in colors and on covers where available. We give real co-operation and sales service--are right here on the spot to help responsible dealers who can show good sales effort and energy.

Wire--or write us quick--for territory that may still be open and for terms.

Grace Motors Limited

243-255 Queen St. East, TORONTO **St. Mary's, Winnipeg**

Canadian Distributors of

Sterling Trucks
Fulton Trucks
Atlas Trucks
Smith Form-a-Truck
Lay Porta Power
Lay Farm Equipment
Phelps Lighting Plant
Arnold Electric Tools
Veeder Odometers
Non-Gran Bearing Bronze

PHELPS Power and Light Plant "The BEST is always the CHEAPEST"

CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Published Monthly by THE MACLEAN PUBLISHING COMPANY, LIMITED, Toronto.

MONTREAL, Southam Bldg. WINNIPEG, 1207 Union Trust Bldg. VANCOUVER, 39 10th Ave. West. LONDON, ENG., 88 Fleet St., E. C. 4. NEW YORK, 111 Broadway. BOSTON, 734 Old South Bldg. CHICAGO, 900 Lytton Bldg

VOL. 1, No. 3 MAY, 1919 Subscription Price $1.00 Per Year

CASE

Kerosene Tractors

Wherever tractors are in use the Case Kerosene Tractor has long been recognized for its efficiency and dependability. Wherever increased production and the saving of labor and money are taken into consideration the Case 10-20 and 15-27 are the practical tractors.

This is why Case Tractors form an important unit in the stock of the dealer who sells farm machinery. The Case is the most saleable of tractors because of the satisfaction it gives in its work and the low cost of operation and upkeep. All this means bigger sales and the consequent increased profits to the dealer who sells Case Tractors.

Fairbanks-Morse Power Farm Equipment

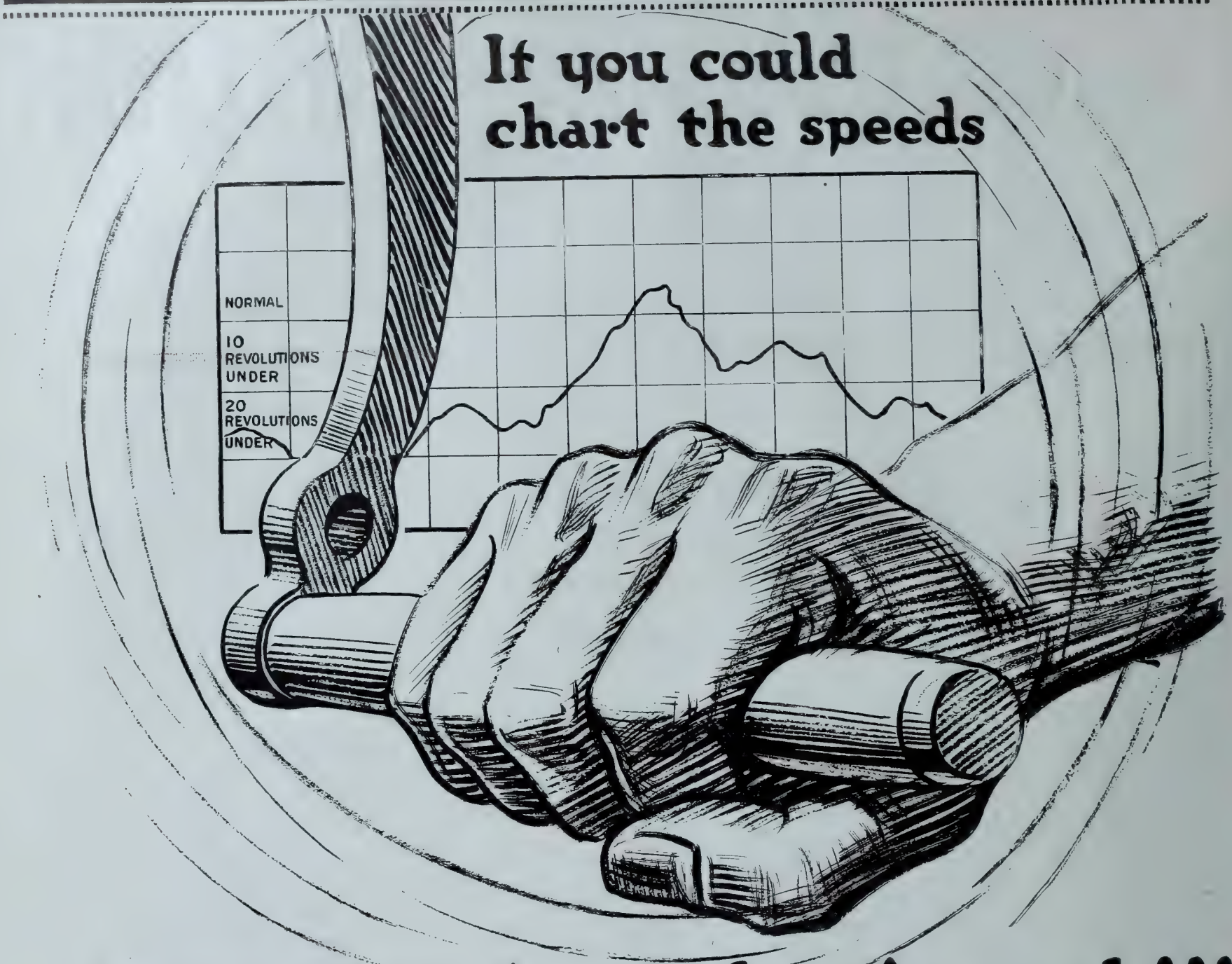
—embraces a line of machinery that insures the dealer of a bigger and better business in those things that are necessary to the up-to-date farm. As essential as the tractor is the "Z" Engine — the more-than-rated-power engine — that is being used by over 200,000 farmers. This is the quickest-selling engine that a dealer can offer his customers, because of its power, its low first cost and its minimum fuel cost.

Fairbanks-Morse water systems, electric lighting plants and other equipment for the farm afford the dealer a field which means more business and larger profits.

Write us to-day about the Case Tractor and other Fairbanks-Morse Power Farm Equipment.

The Canadian Fairbanks-Morse Co., Limited

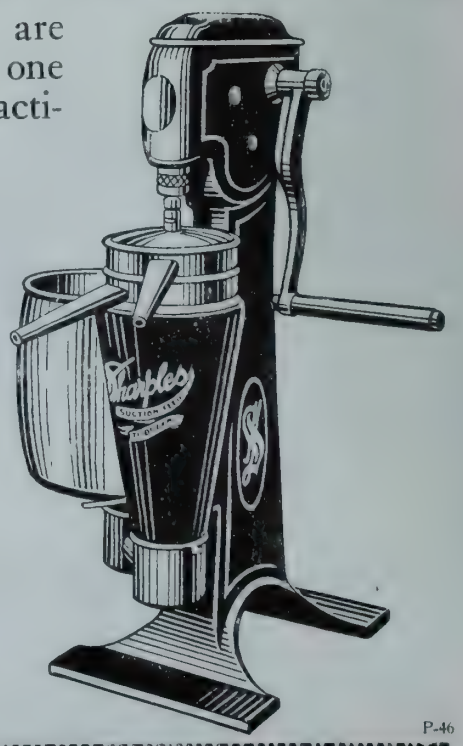
Halifax, St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria.



Around and Around and Around !!!

No human hand can keep up a fixed normal speed

If every owner of a fixed feed separator—especially those who *think* they are skimming clean—could see a chart of the great *variation* in speed during one week's separation, they would be amazed. The chart would show that practically all the time the separator was being turned *below* speed and wasting butterfat. Actual tests prove that 95% of all separators are turned below speed most of the time and all separators are turned below speed some of the time. No matter how careful you are, it is humanly *impossible* to turn at a fixed speed, day in and day out. Speedometers, bells and other contraptions only show the wastefulness of fixed feed separators.



SHARPLES SUCTION-FEED CREAM SEPARATOR

SKIMS CLEAN AT ANY SPEED

Every progressive dealer will be interested in the above reproduction of a Sharples advertisement to dairymen and farmers. It points the way to greater sales; it proves the weakness of the fixed feed separator; it shows why the thrifty farmer is eager to know about the Sharples. Take advantage of it through a Sharples Dealer Contract. There's a big idea behind a Sharples contract. Find out about it. Write nearest office.

THE SHARPLES SEPARATOR CO.

TORONTO, ONT. **REGINA, SASK.**

The Lounsbury Co., Newcastle, N.B.; J. Clark & Son, Fredericton, N.B.,
Distributors through all their branches

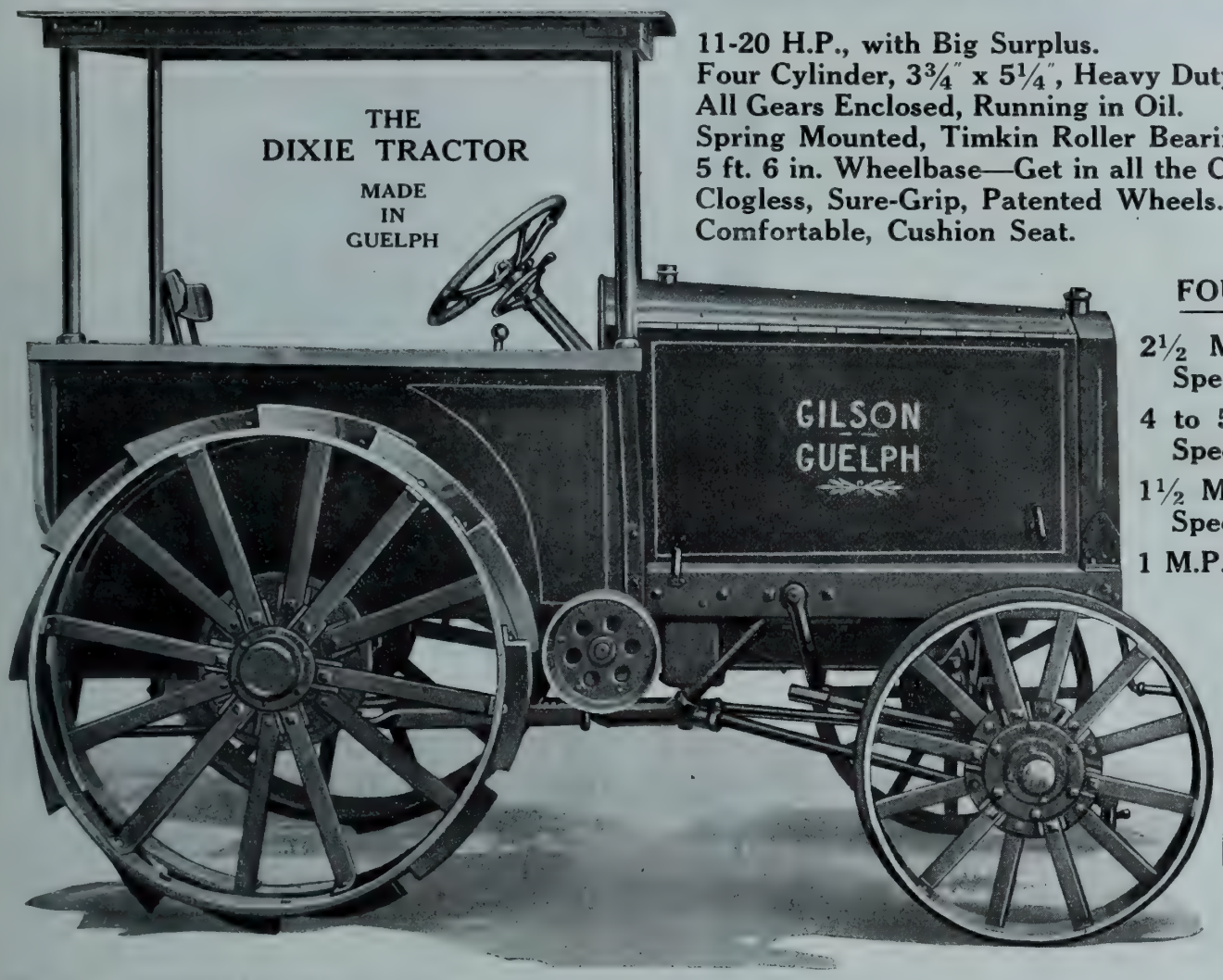
P-46

A Bonanza for the Live Dealer

HERE IT IS!

The Latest and Greatest Tractor Success

THE NEW LIGHT WEIGHT "DIXIE-ACE"



11-20 H.P., with Big Surplus.
Four Cylinder, 3¾" x 5¼", Heavy Duty Motor.
All Gears Enclosed, Running in Oil.
Spring Mounted, Timkin Roller Bearings throughout.
5 ft. 6 in. Wheelbase—Get in all the Corners.
Clogless, Sure-Grip, Patented Wheels.
Comfortable, Cushion Seat.

FOUR SPEEDS

2½ M.P.H. Plowing Speed
4 to 5 M.P.H. Road Speed
1½ M.P.H. Low Speed
1 M.P.H. Reverse

PATENTS APPLIED FOR

The new "DIXIE-ACE" is perfectly adapted for all field, road and belt work. No farm is too small—no farm too large. Every farmer is a prospect.

Its sensible, sturdy, compact and graceful design — its greater range of usefulness — its outstanding quality—its beautiful finish—and its convenience and all-round serviceability make this tractor the biggest seller and the best value on the market. It has more solid, service, selling features than any other tractor. The consumer falls in love with it at first sight.

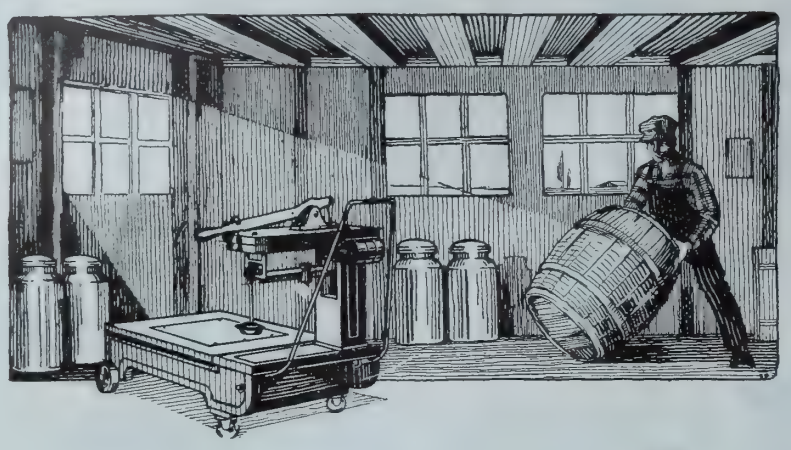
We have a few choice territories not yet covered. If you can handle big business and want to be the leading power merchant in your territory, *write us at once.* You can see the immense possibilities of the proposition—agencies are commanding a premium—*DO NOT DELAY!*

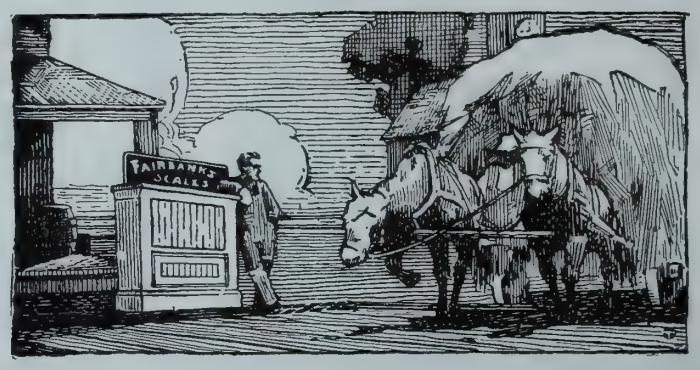
OTHER MONEY MAKING GILSON PRODUCTS

"Goes Like Sixty" Gasoline and Oil Engines from 1¾ to 16 H.P.
The Wonderful Gilson Silo Filler—"The Lightest Running Blower Cutter Made."
The Hylo Silo—One of the Biggest Money-makers You Can Handle.
The Light Running Gilson Thresher—For the Individual or Syndicate.
Gilson Feed Grinders—Wood Saws—Pump Jacks—Pulleys—Belting, etc.

GILSON MFG. CO., LTD.,

Dept. D.A., Guelph, Ont., Canada
Dept. D., Winnipeg, Man., Canada





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CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Volume I — TORONTO, MAY, 1919 — Number 3

Should Tractor Discounts Be Higher?

An Average Discount of 14% to 18% is Not High Enough to Compensate for Extra Time and Labor Involved

TRACTOR dealers, in both Canada and the United States, are not satisfied with the present discounts. Experienced men in the automotive trade, in both Eastern and Western Canada, maintain that tractor discounts are very short, as compared with the discounts in the motor car and truck field. Distribution, retailing and service of tractors is costing a lot of money. Dealers also point to the great amount of educational work which must be done in the assisting of the prospects. In conclusion, they assume that, eventually, tractor manufacturers will have to give larger—"living"—discounts, and maintain that, until this is done, business will be set back that length of time. One authority states that action *at once* is imperative.

Here is the case put forth by the manufacturer: He claims that if any larger discounts are allowed the price to the ultimate consumer would have to be so high as materially to reduce the volume of sales. He holds this to be most undesirable, owing to the fact that one of the chief objections raised at the present time by the farmer to the purchase of a tractor is the—to him—high initial cost. One leading manufacturer says: "It seems to be perfectly natural for dealers, distributors, jobbers, etc., continually to ask for greater discounts, never for a minute seeming to realize that big money in their line is being made by the manufacturers and distributors, who are working on a low discount basis."

WHAT is the actual situation at the present time?

Tractor discounts vary a great deal. There are nearly 150 listed tractor manufacturers in the United States and Canada—the great majority, of course, across the international border. Of this number 84 exhibited at the recent show at Kansas City, and it may be fair to assume that all of these are to be classed as "live " manufacturers. An investigation conducted amongst these manufacturers shows how widely is the divergence of views as to what discounts should be given. Reports received by an investigator from three leading manufacturers show that discounts to distributors run from 15 per cent. to 40 per cent., and to dealers from 5 per cent. to 33 1-3 per cent. About one fifth of the manufacturers deal directly with dealers and thus give no distributor discounts. Many manufacturers give additional discounts for quantity buying.

A summary of the figures procured shows that distributors get from 23 per cent. to 26 per cent. discounts, and dealers receive from 14 per cent. to 18 per cent. *on the average.*

If the dealer conscientiously devotes his time, money, and energy to the selling of tractors he is entitled to an adequate profit theron. As it exists to-day, dealers and agents generally agree that they are not getting enough return for the money and energy invested. Some dealers have gone into the tractor business and made money. Canada, at the present time, has few dealers handling tractors exclusively; there are a very few exceptions in the West. The result has been that the tractor business has been apportioned among the implement and automobile dealers already established in their various territories. Some of these dealers have looked over the tractor proposition and have decided not to "jump in." Many others are waiting to see which way the business is going to go, dallying as it were, to hear the beckoning call from those who have preceded them: "Come on in boys, the water's fine."

DEALERS!—*Do YOU agree with this article? We want to hear from you—whether you are NOW handling tractors or not—what do YOU regard as a proper discount? Write and tell us.*

"Aggie" has led all the way, and will win easily.
Melvill, in "Farm Implement News."

The problem of the manufacturer who wishes to see the tractor business grow as fast as possible, and to serve as wide a territory as his production capacity warrants, is to get as many dealers as possible interested in the sale of tractors—no matter whether these dealers come from what is known as the "implement" field, or from the automobile industry.

ONE very successful distributor of tractors recently said: "The tractor needs more attention, costs more money to give service, and is a greater grievance than ever an automobile thought of being. As for discounts it should not be less than 35 per cent. and in most cases should be 40 per cent., because when you sell a tractor your trouble has only begun. It has created a liability and not an asset. Therefore you should be compensated along these lines."

Another successful distributor says: "I have been somewhat interested in the discounts that companies have offered who have solicited accounts with us. I will say that, while this may be handled on the basis of farm machinery, and perhaps direct from factories to country dealers, I should doubt very much whether they might get the results that an organization, accustomed to handling a big volume of business, might be able to secure for any tractor concern.

"Also, if factories should decide that they could get the best results by using an organization such as automobile people have it would, in my opinion, be necessary for them to change their ideas considerably on discount.

"I should think, off hand, that from 30 to 33 1/3 per cent. discount would be necessary for distributors to take hold of this proposition, thouroughly canvass the territory and put road-men in the fields to help dealers to promote sales, and I should doubt even then if the proposition would be very profitable for a distributor unless it is to be handled in conjunction with the passenger car business. Being a distributor of tractors only would not appeal to me."

Any dealer in Canada who has handled tractors during the recent "boom" asserts unhesitatingly that it is a much more expensive proposition to sell tractors than automobiles. Tractor manufacturers are out to dispose of a big output, and the only way they can successfully do this is to pay adequately the men who do the selling, and conduct national advertising campaigns such as the automobile manufacturers have done, are doing—and continue to do.

THE question persists: Are the present discounts adequate?

One tractor authority who has recently invested heavily says: "The tractor business is not on a sound foundation to-day. It is not a *real* business. It lacks volume; it lacks a sound service policy; it lacks anti-trading policy and also lacks aggressive sales and advertising, such as has made the motor car business.

"It must have all these things. It must have behind it an army of distributors, all enthusiastic and making money. It must have trained salesmen, whose mission in life it is to fill the farm country with serviceable tractors. It must have skilled service men who will

keep the tractors operating consistently and keep their owner satisfied.

"As things stand to-day some dealers, in some sections, with some tractors, are making a little money, but none of them are making what they should. And until they can draw from their business a pleasant profit they are going to enthuse and work in a way that will send the factory shooting through the big volumes that the factories so much desire.

"It is a plain situation—nothing mysterious about it. The tractor factories want to sell a big output, and they can do it if they will only pay the men to do the selling—and pay them adequately.

"Organized on a short-discount basis, the tractor business will never amount to much. With a living discount they can make the grade in a few years, and every one connected with the business can make money."

The manufacturer acuses the dealer, in many cases, of being a poor business man, and says that if he handled his business properly he would make money. The dealer naturally resents it, although it is not denied that most of them see ways in which they might improve.

Regarding the service question the manufacturer says: "Service is a thing that ought to be sold. The dealer should sell this service and the farmer should buy it. There should be no such thing as *free* service after the tractor is once sold."

One of the suggestions made is that the tractor dealer should be divided into three classes.

1. In the first class should be included the "curb-stoners" who would get about ten per cent.

2. In the second class would be the dealer with a small service station who should get about fifteen per cent.

3. In the third class should be the larger dealer who has wrapped up lots of money in the business and equipment, and should get about 20 per cent. with a sliding scale to work on.

SURPRISING to relate, this suggestion of discount emanated from a dealer, who sees a solution of the difficulty in cutting down the discount given to distributors, relating that it is the distributors who make the "big money." Such classification might be quite justifiable and useful, but most dealers assert that the discounts in such events should be respectively 10, 20, and 30 per cent. It all simmers down to this:

The tractor manufacturer wants first-class men to sell his tractors, and to give such service that they will further the reputation of his product by being always kept up to the mark.

The tractor dealer wants to handle a first-class tractor, one which reaches his place of business in A-1 condition and one which needs as little attention as any mechanical contrivance.

The tractor dealer who handles a real serviceable and efficient tractor, and is qualified to give adequate service, will make plenty of money out of his association with the maker—if the discount is adequate.

And, finally, a manufacturer who gives the trade a fair discount will get into volume business ahead of those makers who hold to too short discounts.

Horse Will Be a Rarity in Ten Years

Poor Old Dobbin's Day is Almost Ended, Says A. C. Robertson, Automobile Dealer, Cornwall

"LEARN by experience—the other fellow's, if possible,—but be dashed sure to learn by your own."

This is one of the rules of business life laid down by A. C. Robertson, implement, tractor and automobile dealer in Cornwall, Ont. I had just heard that Mr. Robertson was branching out into the tractor business this season, and had placed an initial order of one carload with the tractor distributor with whom he had decided to do business. Now, a carload of tractors is worth about $10,800, and might be quite an item to handle as a "side line" through an automobile business, but Mr. Robertson looks upon this order as merely introductory. He expects during the present season to sell not merely eight, but twenty-five.

There are some thousands of dealers in Canada who are selling implements and tractors; implements and automobiles; *or* automobiles and tractors, but there are very few handling all three lines. A. C. Robertson's father has been in the implement business for a number of years, and "A. C." thus has had considerable experience in farm implements and is regarded as an authority in these matters around Cornwall and the adjacent district. When he went into the army he sold his business, but he bought it back when he returned to civil life in 1918.

One of the great changes that he noticed in the business in which he had been brought up was that power farming was quickly coming into its own, and immediately took steps to secure the agency for a suitable tractor.

I asked Mr. Robertson if he thought it was advisable for the same concern to be interested in automobiles and tractors, and implements, and whether he thought enough attention could be given to each branch of this business to make it an all-around success.

"I certainly think so," he replied enthusiastically. "This is a mechanical age, and I believe it is strictly logical that the same concern should handle automobiles and tractors. It takes a mechanical man to head such a business, and competent mechanics to carry it on. As regards the implements, I believe though every tractor man need not necessarily handle all the leading kind of implements, he should sell those which are to be used in connection with tractors. To have a proper knowledge of all tractor problems he must be competent to judge the implements which are to be used in connection therewith.

"I AM a great enthusiast as to the future of the automotive business, and just as this preliminary tractor order which I have placed is merely an introduction to the larger tractor business which I expect to do, so I consider the whole tractor business is merely an introduction to the larger business which I forecast is coming from the sale of tractor-drawn, or driven, farm equipment. I believe that in ten years the horse will have become a rarity on the farm and its place will have been taken by automotive equipments. I believe, firmly, that there is a big future for us right here in our Cornwall territory for handling equipment to replace horses."

Mr. Robertson is quite willing to admit that there are a number of things about a tractor that he did not know when he got into the business. So, he took one of his tractors out to his father's farm, and spent a few days clearing up some of the points that were hazy in his mind. Now, he *knows*. Two of the biggest problems that are to be solved by the tractor dealer are those of education and service, and to a great extent they go hand in hand. Particularly in the introduction of a new factor in farm life such as the tractor, Mr. Robertson believes a large amount of service pays.

"Service is really the biggest problem we have to solve. Until the farmers are educated to such an extent that they can look after their tractor and operate it efficiently we will be up against the problem of giving adequate and speedy service. I believe it pays to spend plenty of time with each buyer, in order to see that he understands his machine thoroughly.

"I REMEMBER one incident which occurred some years ago, shortly after I broke into the automobile agency game. Some miles out in the country I sold an automobile to a family which included an old farmer and his daughter. The old man was a great skeptic, the girl was an enthusiast. The farmer did not have much faith in these 'new-fangled contraptions,' but the girl was an apt pupil. I saw how the land lay and I gave the old man a large amount of my time, and taught him carefully so that, after a while, he was driving the car himself quite safely, and even skilfully. All his prejudices against the automobile vanished, and although I found that I had 'wasted' on him quite a number of very valuable days right at the height of the automobile season I found it paid. There were some four other sales in that neighborhood that I could trace directly to the good word spoken by this old farmer, and his enthusiasm for his purchase.

"So it will be with the tractor; it will pay us to go out with every tractor we sell, and work with the farmer with it on his land, for two or three days, if necessary, until we are certain that he thoroughly understands it. This will, of course, cost us money, but it will pay.

"Thus you can see that I am convinced that we ought to give even *extra* service, until farmers are thoroughly 'sold' on tractors, wherever their farms are suitable. And, when a farmer wants service he wants it quickly. He can't wait for it, as he can when something goes wrong with his automobile, and another thing, he cannot *come to me*. Therefore, I will go to the farmer and will keep a service car ready for this purpose.

"There is one little thing that I have found out a dealer should watch in each tractor before delivering it to his customer. Owing to quantity production there occasionally are some minor defects in the tractors which we receive which would bother a farmer if he got the tractor in this condition. But I take great care to go over each tractor after I get it, and occasionally spend half a day or so in eliminating these slight faults, which may be very simple for us but would result in any amount of trouble for the farmer."

A LARGE stock of tractor parts will be kept by Mr. Robertson, and he will make arrangements to give the speediest possible service in the farmer's busy season.

When questioned on the subject of the profits on tractors, Mr. Robertson agreed it was wrong that conditions should be as they are at present, namely, that the profit on tractors is less than the profit on automobiles. It stands to reason that it should be more, because there is more effort necessary in the selling of a tractor than merchandising an automobile. Also, it is more important that the farmer should be satisfied, and the question of giving him this satisfaction will be a considerable expense to tractor dealers for a number of years yet. Until the farmer knows how to run a tractor skilfully and to the very best advantage, he will need an inordinate amount of service, and for this reason tractor discounts should be larger than on automobiles.

Mr. Robertson thus intends to handle his tractor business on the same basis as his automobile trade. He will carry a full line of tractor supplies and will give the same service as he would were his customer buying automobiles. In selling cars he found out that it was, for him, good business to give three months' free service. This costs money but it is worth it, he asserts. In other words, what is sauce for the automobile is sauce for the tractor, is Mr. Robertson's philosophy.

Mr. Robertson's father is still actively interested in the business, although he specializes more on the implement end of it. The Robertsons, however, are not going out of the automobile business just because tractors have attracted so much of their attention during the past few weeks. On the other hand, Mr. Robertson has this spring organized the Cornwall auto sales, and has made plans to erect a new and well-equipped garage near the postoffice in Cornwall.

BE A TRACTOR SPECIALIST

Every tractor dealer should be a tractor specialist, asserts a well-known tractor company's branch manager. This man goes on to say:

"No man can successfully sell tractors unless he becomes thoroughly imbued with the advantages of power farming and thoroughly understands the machine that he is handling. For this reason, we insist that more attention must be paid to our dealers after they sign a contract than before. Our co-operative selling helps impress upon the dealer's mind that he is a component part of a big, essential industry, and that we are ready at all times to assist him in putting over the idea that he is the tractor specialist in his particular community."

"Unfair Competition" Hurts Auto Dealers

A Talk on Price-Cutting, to Auto and Accessory Dealers

By WILFRED HODGINS

UNIVERSAL MOTOR SALES, LONDON, ONTARIO

A WELL-KNOWN American manufacturer recently stated that an unsuccessful business man is a menace to the community. In no business is this more true than in that of the automobile and accessory dealer. An unsuccessful dealer lowers the prestige of other dealers in the same line in his community; if he goes out of business he is likely to leave a lot of bad debts around his neighborhood; he helps to lower the general level of business in his section; and in the majority of cases it is because he has conducted his business on essentially unsound principles.

The causes of failure are many, but there is one on which I feel qualified to write. I refer to the evils of price-cutting and I contend that, until "unfair competition" between dealers is eliminated, there will be a great deal of friction and many failures. While the automobile and accessory business is booming it may be possible that many dealers who are not as good business men as they ought to be, may indulge in the expensive pastime of "unfair competition," and not actually go to the wall, but their profits will be very much lessened by any such practices.

For the past few years I have given this matter considerable thought and study, and I would term "unfair competition" as that in which one dealer gives quotations, or sells articles, that are listed for resale by the manufacturer at a price under the manufacturers' list, with the purpose of "slipping something over" his competitor who is trying to make an honest living and give the public value for their money. By this, a man hurts himself and also hurts his competitor. A manufacturer almost always takes into consideration the service dealers will have to give in handling his products, and sets the various prices so that there will be a margin of profit that will enable business-like dealers to make a good living, and build up a strong demand for his various lines.

WITH THESE YOU CAN GO FORWARD WITH NO FEAR OR DOUBT AS TO THE FUTURE, AND YOU WILL FIND EVERY STEP OF THE WAY PAVED WITH PROFIT — BUT BE SURE YOU DO NOT PASS THROUGH THE EASY-SWINGING DOORS MARKED "FREE SERVICE", "LONG TRADES", AND "CUT PRICES".
EDUCATION
HARD WORK
BACK BONE
COMMON SENSE

The Keys to Success.

—From "Motor World."

THE day of haggling over prices is rapidly passing and the most successful firms in the country in every line are adopting the one-price system. The best rule is: Set one price, make it a fair one—neither too high nor too low. Make it one on which there is a reasonable margin of profit, and then rigidly adhere to it.

In handling motor cars and accessories the price to which a dealer should adhere is, of course, a list price. The firm that has two or three prices is usually forced to give its lowest one in order to give the company a deal. When a company of this kind gets the reputation of being a price-cutter, the shrewd, calculating buyer will make an extra effort to induce the salesman or manager to make price exceptions in his particular case.

If you observe those dealers who sell under the list price you will notice that they do not invariably do this, and if they can get more for an article than the list price they will usually do so. In fact, instead of setting a definite profit, based on sound business common sense, to be secured on each article, some dealers in the past—and, I regret to say, some at the present time—charge "all that the traffic will bear." It takes the price-cutter longer to sell his machine than the one-price man, and therefore wastes his time, for the haggling over the matter often requires more valuable time than would be represented by the entire profits on the car. The man with one price has an important advantage over his competitor with several prices, because he can lay more claim on the *quality value* of his product.

Many dealers cut their prices and wonder why they are not making money. The fact of the matter is they have cut into their overhead expense, which usually averages 25 per cent. above their first cost. They may be fooling themselves into thinking that they are making a profit for a while, but this will not be for long.

If a dealer would figure out closely his profits, distributing them among such items as rent, wages, advertising, bad debts, depreciation, interest, etc., he would be startled to find the small amount of profit he is making on practically all the accessory lines that he has been handling. It is my opinion that in the past manufacturers have not been strict enough with their dealers in maintaining their list prices and some have rather encouraged cut rates in sale. This has resulted in the past that there has been a strong tendency for the dealer to go the extreme along the line of price-cutting, and using other underhand methods of obtaining business that he would not dare to try if the manufacturer insisted on the sale price of his goods being exactly the net list price—no more and no less.

MANY dealers will say: "In this particular case, I will give this man a reduction because he pays cash." It is preferable however, to have a set, published cash discount whether it is two or five per cent., and give it to everyone who pays cash. Many people who are accustomed to buy on credit will pay cash to take advantage of the discount. That is the reason it is better to make a cash discount a regularly-established and uniform feature, instead of an intermittent and uncertain one. It is often an inducement in making the sale that is far more tempting to the buyer than the cut price, because he can see that he is receiving a standard product at a little lower price because of his ability to pay cash.

Promiscuous price-cutting is a harmful practice and should not be encouraged by either the dealer or the manufacturer. It should be abolished because it lowers the morale and efficiency standard of the business.

Without hesitation I would say that the automobile and accessory dealer in Canada has suffered more from unfair competition in tires than in any other line he sells. His trouble is caused to a large extent by the fact that the different tire manufacturers have placed their tires with other than accessory or garage dealers, and in many other cases have offered special discounts to dealers, to enable them to put the tire on sale at price less than list price, and still make the same margin of profit as certain other dealers, who sell at the net list price.

There are certain manufacturers who have been dealing, let us say, with a dealer for 8, 10 or 12 years, and for this reason give him privileges and prices which they do not quote to a dealer whose connection with them has been more recently established. The dealer who has made this preferential arrangement is naturally loth to surrender this, but for the good of all concerned, including himself, he should stick to the list price. Also, I repeat that the manufacturer should sell to the dealer on a strictly one-price basis.

THE only way I can see by which unfair competition may successfully be eliminated is for all garage and accessory dealers to unite to protect their own interests and work in harmony with the manufacturer. If this is done throughout each Province, and ultimately throughout the Dominion, the dealer will find out that his competitor around the corner is a pretty good fellow after all, and quite willing to meet him half way on any proposition which he might want to bring forward. By this method of co-operation of the dealers, facts which they want to present to the manufacturers can be put together in a more definite and concrete state, and by united representation dealers are more likely to get what they ask for from the manufacturer,—especially when what they ask is most reasonable.

In this connection, I would like to point out that there is good work being done by the automobile section of the Retail Merchants' Association of Canada, through the secretary, W. C. Miller. The second annual convention of this branch of the Retail Merchants' Association brought out many interesting points, and it is along such co-operative lines that future progress must be made. By being affiliated with this organization, the automobile and accessory dealer is able to get into closer touch with the manufacturer, not as an individual dealer but as an association of dealers with one common object in view. Much has been accomplished through this organization, especially in the larger cities where dealers are now working in closer harmony and realizing that it means more dollar and cent results.

There is no reason why this work cannot be extended so that it will include every dealer in every town and village throughout the country. It is one way in which we can become a better and a sounder business man.

POLITICS AND SELLING

"Never mix up in politics" is the advice in one case given by an automobile dealer who was retiring, to his successor in business. Other dealers find it advantageous to take an active interest in politics and local administration of all kinds. The best solution of all, says one man, is not to get your politics and your selling points mixed.

"Give it to them straight, whether it be politics or the selling of a farm implement or an automobile," he says. "Never mix up the two"

Tractorizing Mr. R. J. Fleming's Farm

The Advent of Mechanical Power Into a Community Means More Business for the Dealer. The Power Machines Must Grow

By F. MACKENZIE CHAPMAN
EDITOR OF "FARMERS' MAGAZINE"

THE adoption of tractors by farmers does not mean that horses are doomed. No one can argue with convincing reason against the purchase of our modern farm power machinery, because some horses must be ever maintained on the farm. Horses will be needed on Canadian farms almost i-n-l-e-f-i-n-i-t-e-l-y. Yet if a machine can do much of the draught work of our farms, the demands for increased production under the present shortage, are going to force the use of every mechanical device possible. Already we are feeling keenly the need for more power. There is not a farm in the country that is not concerned more or less with this question. And I predict an increasing emphasis on the need for some years.

Plowing a heavy patch of weeds and turning them under perfectly without a chain.

And in this emergency, the tractor, the truck and the car are indispensable. Already the farm automobile needs no argument for its purchase by farmers as fast as the manufacturers can equip them. Trucks are also coming in rapidly. Tractors complete the trilogy.

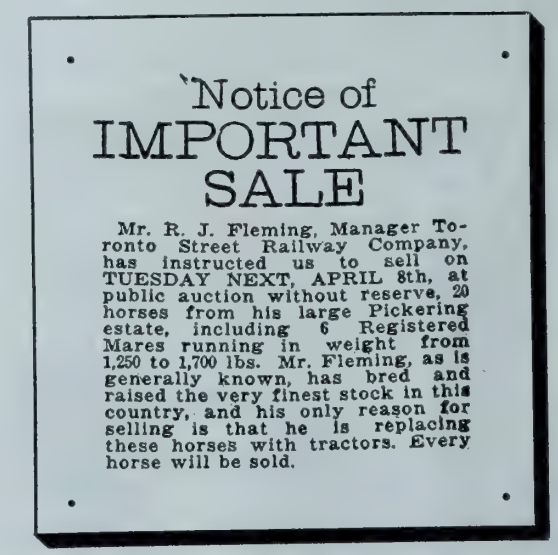
Under intelligent care and that mechanical sense that the farmer-born easily develops, these internal combustion power plants are successful past all expectations. While a few may have thrown their experimental machines to one side, there are enough enthusiastic lovers of this traction and draught power to ensure an ever-increasing demand for machines.

THE splendid farms of R. J. Fleming, manager of the Toronto Railway Company, which occupy 1,000 acres of Ontario county's finest lake front soil, offer peculiar advantages for the application of mechanical power to farm operations. You will find there a rich clay loam, watered by two streams and situated in almost a solid block lying adjacent to the Kingston Road in Pickering Township, which road is now part of the Provincial Highway. Here large fields, and a rolling land surface, are favorable factors for the use of tractors and trucks. Last season it was a common sight to see big 2-ton trucks going out to the potato fields to carry their products direct to the big Toronto markets, potato fields that had been almost entirely handled by tractor power. So successful were the tractors in their cultural and draught work that it is proposed to further introduce them into the farm operations and so the advertisement shown on this page for the sale of the farm horses is explained. The demand for farm machines is always increased when the tractor enters a neighborhood.

The results of the tractor operations are best learned from an interview with R. R. Fleming, one of the sons who operated and managed them last season.

IT is just three years now since we invested in our first tractor, a 15-30 of one of the most common types seen in the West, said Mr. Fleming, Jr. Here, of course, with a large proposition on our hands it was but natural that we should try to imitate Western conditions. As we do all our own threshing and silo filling, it was essential that we have a large machine to do the work; and having a large engine it was natural that we should use with it a large gang plow. We were not entirely blind to some of the disadvantages of introducing on to an Eastern farm a large plow unit; but thought that any difficulty might be overcome by taking down fences and making larger fields. There was, however, a limit to this owing to the rolling nature of the land and the presence of many ditches. Moreover, the many grades in the fields which, with horses, never bothered us, became a serious proposition when our engine, crowded to its capacity on the level, refused to take them until one or two of the plows were removed. What was a difficulty in dry weather was more than accentuated in wet weather. So that finally we abandoned the idea of using this machine for ploughing, and now use it only for belt power.

We on farms who are accustomed to getting on to new farm machinery and operating them with little previous experience are somewhat shocked when we find that we cannot do the same with the tractor. It is so easy to draw an analogy between the motor car and the tractor and think that because the farmer is readily adapting himself to the former that he can do the same with the latter. But there is quite a difference.

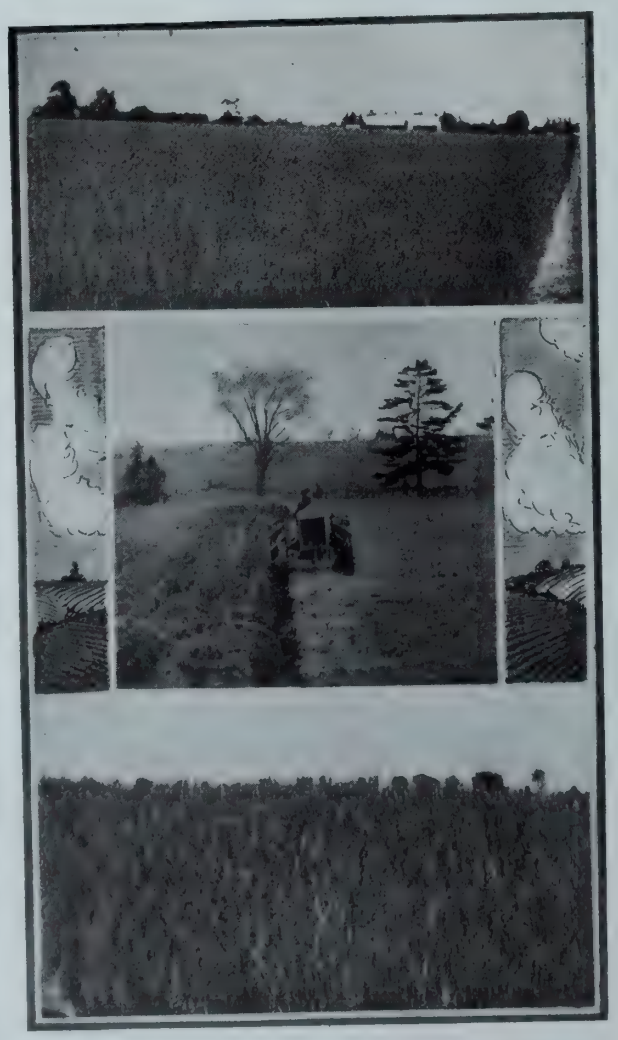

Notice of
IMPORTANT
SALE
Mr. R. J. Fleming, Manager Toronto Street Railway Company, has instructed us to sell on TUESDAY NEXT, APRIL 8th, at public auction without reserve, 20 horses from his large Pickering estate, including 6 Registered Mares running in weight from 1,250 to 1,700 lbs. Mr. Fleming, as is generally known, has bred and raised the very finest stock in this country, and his only reason for selling is that he is replacing these horses with tractors. Every horse will be sold.

The motor car on the farm is as a rule only used for a few hours a day and then it is usually light work. If anything goes wrong it is one's pleasure that is affected. The tractor, however, working steadily all day and under full load all the time requires a great deal of attention, which if not given brings only one result, delays, when you need your machine most. *There are now thousands of tractors in Canada, yet out of this number only a surprisingly small number of drivers could be found approaching anything like efficiency.* In view of this we receive with amusement the statement so often made regarding the simplicity of the tractor, that "any boy or girl can run them."

One of the tractors on the road.

It is now two years since the second tractor demonstration held in Ontario took place on this farm. We had, therefore, rather exceptional opportunities for studying the different makes exhibited. Like many others we were very much taken with the Fordson Tractor and accordingly placed ourselves on order for two machines. When these were put on the market we were among the first to receive them.

In view of our earlier experiences with a tractor, they received a somewhat doubtful reception; however, after having been used constantly for nearly four months, there is only one thing to be said and that is that everybody who has seen them work is their friend. They have been used chiefly for ploughing, and under many different circumstances, also for double-disking, cultivating and harrowing—anything, in fact, for which you would use three or four horses—and we find that they do on an average about twice the work of either of these horse units. When haying commenced they were started ploughing in between the cocks in the first field that was cut and kept following the wagons from field to field almost as fast as the hay was cut. Some of the fields were not only ploughed once, but twice and thoroughly worked up between times. Then rape or buckwheat was sown. This has been done in the hottest part of the summer when in other years we would not have attempted it. Furthermore, it has only taken two men, whom we have set aside to do this work and nothing else. *We have not done nearly enough ploughing on this farm during the last three or four years; chiefly because, in the rush of work, with the horses it has been found so slow and difficult. Yet* it is just at such times when the soil is driest and the weather hottest that dirty land receives the greatest benefit by being turned up.



Views on the Fleming farm. Top one shows a Marquis wheat field and the horse barns in the rear. Middle one shows plowing for the wheat crop and lower a close up view of the wheat. 200 acres were produced that averaged about 40 bushels. No better or more uniform stand could be seen. Tractors plowed the land and harvested the crop.

WE have learned that *it is far cheaper and much better all around to hoe weeds if possible before they can be seen.* Not only are they killed with half the work and in half the time, but the nourishment that would otherwise be required to grow them to a certain height is retained in the soil. On the same principle it can easily be seen how economical and how important is mid-summer plowing wherever possible.

Tractors have enabled us to cut down the laborious and expensive hand hoeing to a minimum and to but a fraction of what it has cost in previous years. It used to be that we sowed our hoe crop on dirty land expecting to clean it later; now we sow it only when we are positive that it is clean. In these days of keen competition, the man with the hoe cannot compete with the man with the plough, who starts six months or a year earlier.

Another implement that the tractor has enabled us to use to a great extent is the double disk. Owing to the fact that the single disk has proven so slow and hard on horses and has such a tendency to pile the field up into ridges, we have never used it very much. With the tractor, however, and the double disk, both these difficulties have been overcome. The latter is generally kept alongside the ploughs and each day when ploughing, we hitch on to the disks at night to run over what

has been done during the day. *As an implement to make a fine seed bed, the double disk is without a peer.* We have found the capacity of this tractor to be a 20 tooth spring cultivator. When using a stiff tooth cultivator, we have just hitched on to one of our horse machines, having a special attachment made for the purpose. We are also using the tractors with success on a 7 ft. binder. It will draw two 7 ft. binders under ideal conditions.

IN looking over our records for July, I find that one machine has done the following work:

It has worked 24 days.

It was idle for three days owing to rain.

Two of these days were utilized for cleaning out carbon and grinding valves. Carbon should be cleaned out every week or ten days when machines are running steadily.

Total actual work done in fields—172 hrs. 35 min. Average work per day—7 hrs. 11 min. Working on a 10 hr. basis, the remaining hours were spent in repairs to machine such as cleaning spark plugs and coils; stops for showers of rain; changing machine from field to field; work on ploughs, etc.

The machine ploughed during the month 58.97 acres in 106 hrs. 30 min. It took on the average 1 hr. 56 min. to plough one acre. This includes time spent in striking out lands and finishing headlands. It double disked 34.6 acres in 18 hrs. 50 min. and took on the average 32 min. to do 1 acre.

It cultivated (stiff tooth, with harrows behind) 48.5 acres in 27 hrs. 30 min., averaging 1 acre in 34 min.

It used 249 gals. engine naphtha in 172 hrs. 35 min. running time or an average of 1.4 gallons per hour. In the same time for starting and stopping, 5.62 gallons or 1 gallon every 32 hrs. running time. Also of cylinder oil 12.12 gallons or ½ gallon per day, and during the month 5 gallons heavy transmission oil and ½ qt. grease.

IT will be seen from the above that we keep accurate record of our work. We might just as well close up the farm as not do this. The record of each machine is kept separate; and the work done by each is measured up every day before the machine leaves the field, recorded on a time sheet and handed in to the office, where is hung on the wall a map of the farm showing the different crops in different colors and giving the exact surveyed dimension of each field. Knowing from this the length of our fields we merely step off the width of the work done. This is readily computed into acres and gives us accurate figures to the second decimal point. It takes but a second to do and is invaluable to us. Then when the field is completed, we have a further check on the work by knowing that the individual day's work should tally with the total area of the field. One of the chief reasons in being so particular about our records is for the purpose of arousing the spirit of competition in the drivers. To do this, we had a large board hung up in the tractor shed on which was tacked a large ruled sheet for the month, giving side by side the work done and general particulars about each machine.

Thus a continual comparison is created and we find that the men follow closely from day to day the work of the machines. When one man is falling behind, he becomes naturally anxious to pick up. Of course we want our figures to be as simple as possible.

By having ruled sheets, and columns for the different items, all that is necessary to do at the end of the month is to add them up. Just at present it will not pay us to invest in an adding machine; on the other hand we cannot afford not to use one. Arrangements were made with an expert in the city to do this work for us at a very nominal figure. At the end of the month, the various sheets are simply enclosed in an envelope and sent away to be added. In a few days they come back all completed, with practically no time wasted on our part. Duplicates are then mailed to the head office of the farm in the city to pass inspection before the president of the institution, who, with a critical eye, is not slow to perceive how fast the work is being completed and which of his men is giving the greatest return for his monthly wages.

WE try to be explicit in enumerating the delays, which enables us to study the weak points in the machines and to have on hand repair parts for those that are most likely to go wrong. Already we have found most of our trouble in the ignition system; and have so far had only one serious delay, that being caused by weak magnets in the magneto, which being housed in the interior of the machine are supposed to last almost indefinitely. A similar complaint from other users leads us to suspect that right here is a weak spot in this tractor.

POSSIBLY no stronger evidence of how we like the tractors could be given than to say that we are now adding to their numbers. We have been more than pleased with them. With a larger number, it will be possible to get more out of each machine. A small tractor of the type we are using will enable us to standardize our traction power. That is where the small machine proves superior to the large. The former can be used as a single unit. To increase its range of work you simply multiply its number, and it can be done as cheaply. When the large machine (the equivalent of a number of small machines) is working they must all be at it or none. Our next step will be to have our men specialize. One man will do nothing but plough. By reason of his doing the same work every day he should become more proficient than if he were scattering his energies over different jobs from day to day. Men must not do boys' work, or *vice versa*. So too, men who possess technical knowledge of more or less intricate machinery like milking machines and of such complicated subjects as bacteria must not be asked the next minute to fork manure; or skilled mechanics should not spend part of their time at ordinary laboring jobs around the farm that anyone can do. And furthermore they should be paid accordingly. I am referring of course to such conditions as will enable this to be done; i.e., where men are employed on a large scale.

As a step toward this in organizing our tractors, we are having the drivers do nothing but drive. The field each man works in is his factory for that day. When he comes to his machine in the morning it will be ready to move off.

AS to whether the man on 100 acres should invest in some tractor must depend on circumstances. Where enough work is to be done and there is assurance of their being efficiently handled, they certainly prove a sound business proposition. There is a great field for custom work with tractors. The man who can do good work with a small machine should be able to do satisfactory ploughing for the neighbors cheaper than they can do it themselves and then make a profit. This is one way of getting over the difficulty, if the small farm that owns a machine cannot make it otherwise profitable. We have found the tractor adaptable to practically every kind of work on which we use the larger units of horses. On stony roads they are of little use for road work on account of the shaking the machine receives due to large cleats on the rear wheels and its speed. For plain wheel machines they do exceptionally well on soft land and particularly on steep grades. The other day while ploughing a swamp, almost immediately after a rain, where the weeds had grown nearly six feet high, a neighbor who came across to see it work was absolutely surprised that any machine would go through it. In using them under all kinds of conditions, we have never had to pull one out of a hole. To save time, a chain is always carried on the engine and attached to the implement behind. If the wheels begin to dig themselves in, we simply draw out the bolt out of the clevis, drive forward, and the job is done. This is all because of the exceptional light weight of the machine, its wealth of reserve power, and the extraordinary gripping power of the driving wheels due to the cleats.

NOW IT'S STARTING TO BOIL!
IT WASN'T HARDLY GOING WHEN I COMMENCED TO FAN IT.
AUTOMOTIVE BUSINESS PROSPERITY
AUTOMOTIVE INDUSTRY
—AND WE'LL KEEP IT GOING!
SHOWS
DEALERS
PUBLICITY RACES TOURS ETC ETC

The automotive industries came to life more rapidly after Armistice Day than any others. With manufacturers, distributors and dealers all "on their toes" there'll be nothing to stop 1919 from being a banner year.

—From "Motor World."

Tractor Imports

Tractors costing less than $1,400 are coming into Canada by the thousands—literally. The following figures show the rush during January, when it was uncertain whether the order-in-council of February 7, 1918, would be continued.

The totals, as far as known at Ottawa, are as follows for the early part of 1919:

	Traction engines for farm purposes costing not more than $1,400 in the country of production.		Traction engines, parts of, such as auto. attachments for farm purposes.
January	3,302	$3,512,038	$125,139
February	1,480	1,584,596	187,328
March	467	448,323	70,940
Total for 3 mos.	5,249	$5,544,957	$383,407

Rush Implement Exports to France and Roumania

Canadian farm implement manufacturers have participated during the past few weeks in important export business with Europe, and shipments already made to the devastated area of Northern France were forwarded on comparatively short notice to aid the peasants in preparing the land for this season's crop. The first order in connection with reconstruction was received early this year from the French Government. The object was to extend State aid for the people who could not help themselves. Payment for this business is made by the Government of France, and while the initial order is not considered to be by any means all that will be forthcoming for Northern France for this season, it is considered that the subsequent business will be financed through other channels. Grain and hay-cutting machines, ploughs, etc., formed the bulk of the order. Shipment of part of the order was made several weeks ago, and the remainder has just left Canada.

Considerably more than $1,000,000 was involved in the business secured by the Canadian manufacturers of farm implements. This is independent of the regular business with France. The providing of credits to the extent of $25,000,000 through the Canadian Trade Commission for the orders of textiles, foodstuffs and agricultural implements for Roumania has also opened the way for export business with that country. About a month ago orders were placed in Canada for a considerable quantity of farm implements, about half the size of the French purchase. Rapid delivery was sought by the Roumanian purchasing authorities. Date of shipment was fixed for six weeks from the time of placing the order, which under present conditions would leave insufficient time for securing the raw material required. The manufacturers have accomplished the difficult task of getting the goods ready in the limited time at their disposal.

The total amount of business already transacted with France and Roumania is understood to be considerably in excess of $2,000,000. The Scandinavian countries have also been in the market for Canadian implements, and some trade has passed with Holland. South-eastern Europe, and Roumania in particular, is looked upon as the source of further important orders for farm implements in connection with reconstruction needs.

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TRADE JOURNAL

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ARE YOU "HOLLERING?"

THE editor of *Auto-Links* tells the following story which is worth passing along:

A little negro newsboy ran up one day to one of the senators on the steps of the Capitol in Washington, pushed a paper in front of him and begged him, "Boss, read me something to holler about!"

Something to holler about! That boy knew that he could sell more papers by hollering than he could by keeping still and waiting for customers to come to him.

And yet there are many accessory dealers whose stores are full of good things to use on automobiles that are worth "hollering about" but who do no hollering at all; they just wait for customers to come into their stores. If customers don't come "business is poor."

LETTERS AND PHOTOS

WE want to co-operate with automotive and implement dealers, and we want *you* to co-operate with us. There are plenty of ways in which you can do this, apart from forwarding your subscription.

First: you dealer-readers who are in the daily grind about 313 days each year—less the holidays you ought to take—cannot help but have ideas of your own—ideas that would be very helpful to the editorial staff. There may be something said in these pages with which you *do not* agree; also there may be topics that we haven't yet touched on which you would like to see written up.

Write and tell us. We mean this. We have received, though this is only our third issue, many complimentary letters and helpful suggestions. You need have no hesitation in criticising—we're pretty thick-skinned, having spent about one-seventh of a century in various kinds of newspaper and publishing business.

But—

The kind of criticism we will welcome most cordially is a *constructive* criticism. Don't knock without suggesting a remedy.

Second: All dealers are interested in all other dealers. That's so, isn't it? If you aren't you should be. Therefore, send in pictures of your places of business, machinery and window displays, repair shop and service equipment, deliveries of an unusual nature, carload shipments, tractor and other demonstrators. These pictures must be clear; other pictures won't reproduce satisfactorily.

WHAT DO YOU THINK?

WHILE we're on this subject, what do you think of two articles in this issue:

Tractor Discounts, page 3, and

The Manitoba Implement Act, page 14?

Do these accord with your views?

AN ACCESSORY "TIP"

WHENEVER a certain auto accessory dealer—and one of the "livest" we have ever met—spots an automobile or truck fitted with some new gadget, or accessory, he takes a note of the number of the car, and a few days, or few weeks, later 'phones the owner and asks him how he likes it. There are approximately 7,000 accessories on the market, and dozens of new ones coming out every month. The majority of dealers do not like to stock up with untried accessories, and we know of no better way than that adopted by the above Western Ontario dealer to tell the "hits" from the "duds."

RIGHT BACK AT HIM

SPEAKING of prices—a bluff rancher and his local dealer, walked into a factory branch of one of the harvester houses recently, seeking a quantity price on ten binders, needed on his broad acres. About his first question was, "When are these blankety-blank machines of yours coming down?"

"Oh," said the manager, who ordinarily doesn't swear, "about a month or so after your blankety-blank wheat comes down."

And there was more truth than profanity in the manager's succinct analysis.

TURNS FORD INTO ROLLS-ROYCE

THERE are more than 7,000 accessories that a man may purchase to put on his automobile.

It seems as if the brains of the whole country had been devoted to the devising of accessories to put on the automobile market. Now a man can spend as much fitting up his car as the car itself is worth, and some of them do it. So perfect has this accessory art become that a skilful mechanic can almost rebuild a Ford into a Rolls-Royce without undue effort.

And fittings not supplied at the factories are increasing in demand. Some time ago dealers were afraid that as the manufacturer added top tires, speedometer, tire rack, etc., to the car as delivered there would be less need for extra accessory features. This has not been true because there are always new devices being invented that have to gain a market through the individual buyers, because as cars grow more popular so tastes will become more individualized and owners more particular about equipment they think best expresses their own whims or personalities, and for one other reason, the word "accessory" is passing.

In its place is coming "automotive equipment." Automotive equipment means all that the word it is replacing does, and more. It is a more general term for all the equipment of the modern pleasure car, truck or business vehicle. This term may become more general in its scope than it now is, and accessories or automotive equipment that once meant a strange horn or some unnecessary decorative elaboration, that now mean most of the added features of the car, may in the future include a good part of the car itself.

Tires themselves are equipment, rims, wheels, etc. In this way the old "accessories" are going out only to be supplanted by automotive equipment serving more inclusive purposes in a very broad way.

Only recently have people become educated to the fact that a bumper is a necessity on the modern car especially for traffic and touring protection. Cars are not yet regularly fitted at the factory with bumpers, as a rule, and motorists therefore have to purchase them later. The motor-meter, a new device which when attached to the radiator cap will show at a glance the exact condition of the motor, is not standard equipment. As all engine troubles are instantly reflected in the water temperature and with this device a motorist can detect a broken belt, late spark, oil lack, poor carburetor or lack of water, it is in greater and greater demand.

Then there are fire extinguishers that not only protect a car but reduce one's insurance by 15 per cent. And priming devices to save battery strain, cold air shutters or chokes, trunks, trunk racks, klaxons and mechanical hand horns to replace the old bulb variety, no-glare lenses that penetrate fog and dust and diffuse and lower the light instead of concentrating it in one blinding stream; the electric bulb business is growing all out of proportion, mirrors are being used, spot lights to locate house numbers or sign posts in the country, shock absorbers, non-skids and a host of other things useful, necessary and in constant demand.

The equipment of tire and repair shops is becoming a big item in the accessory business. Accessory manufacturers have in most cases been able to overcome the unnatural war conditions more quickly than the automobile manufacturers because as a rule their plants are smaller and more easily put into varied operation.

CROP CONDITIONS GOOD

REPORTS from all parts of the country indicate that the wheat acreage this year will be very large. The unusual weather conditions have resulted in the winter wheat being in better shape now than for many seasons past. In many places in former years, as a result of heavy frosts and other climatic conditions, there had been a great deal of deterioration. This year the average condition of the crops up to the present time shows up most satisfactorily. All this means that there is likely to be a big demand for binder twine. From the West come reports that indicate heavy buying of farming implements and machinery in anticipation of handling big crops.

BOOST FOR GOOD ROADS

IF there is one public-spirited movement more than another which every automobile dealer should be back of with all his energy and "zip" it is the Good Roads Congress. About five years ago this movement was started by public-spirited men in Montreal, Toronto and Winnipeg, and, despite war handicaps, has grown vigorously. Canada must have a transcontinental highway which an automobile can make use of without getting the "innards" shaken out of it. For selfish reasons, if for no other, it will pay dealers to help out this good work. Back up movements for good rords appropriations whenever you have the opportunity. If you attend the Fifth Annual Congress to be held in Quebec City, May 20, 21, 22, you will be able to combine a pleasant trip to Canada's Citadel city with some very profitable and instructive sessions where international authorities will discuss the ways and means for getting better roads.

TWO-PAYMENT TERMS

AN Indian farmer bought a plow from a Canadian implement dealer who had changed his terms to cash. Accustomed to buying on time, the red man, after hearing the price quoted, asked: "How many pay?" The dealer promptly replied, "Two pay," and the Indian asked, "When?" "One-half now and the other half when you put the plow in your wagon," replied the dealer.

ADVERTISERS' STABILITY

IN 1911 there were 109 truck builders in the United States and Canada.

How many are there to-day?

Only a score who are really doing enough production to be considered actively in the game. One manufacturer tells us there are not more than 18.

In many cases the maker has gone out of business and parts are hard to obtain—impossible in a number of instances. This shows the value of investing in a widely-known, nationally-advertised product. They are in the business to stay, and have the capital and aggressiveness to "put it across."

Last year 84 per cent. of all the business failures in Canada and the United States were *non-advertisers*.

Doesn't this point a moral?

WE WEAR ——— CUFF LINKS

DO you ever stop to figure out just what an *immense* help these national and international advertising campaigns are to you? In many cases your goods are sold *before* you've said a word to the prospect. All you have to do is to hand them over, and take his money.

Last night we went into a "gents'" furnishing store, to get some cuff links. What kind? We glanced over several samples in the silent saleman, as the clerk waited for our choice. They all looked pretty much alike, until we spotted a row of cuff links on one card, just like the brand which has been staring at us every week for some months in the pages of the *S. E. Post*. We'd been reading about them; we'd seen their merits fairly shrieked at us; did we fall?

We did, and a pair of——cuff links may now be found adorning our shirt, if you care to drop in and favor us with a call.

IMPLEMENT CENSUS

THE Dominion Bureau of Statistics has completed a preliminary census of the agricultural implement industry in Canada for the calendar year 1917. The census covered altogether 90 establishments. These were located in the Provinces as follows: Alberta, 1; Manitoba, 7; Nova Scotia, 1; Ontario, 56; Prince Edward Island, 1; Quebec, 21 and Saskatchewan, 3.

The total capital invested amounted to $70,493,801, divided as follows: Land, buildings and fixtures, $13,381,463; machinery and tools, $6,140,082; materials on hand, stocks in process, finished produces, fuel, etc., $23,127,626; cash, trading and operating accounts and bills receivable. $27,844,630. The total capital invested represents an increase over 1919 of $10,964,710, or of 18.4 per ecnt.

Selling Repairs—A Real Sales Opportunity

By B. J. PAULSON, of Chicago, Tractor Expert

A REPAIR part in itself is frequently a very small thing—but it is one of the little things that count. As a factor in the success of an implement dealer and the goodwill and prosperity of the farmer it often looms big.

Suppose a binder breaks down right in the middle of harvest. The season is late and the farmer has a big crop of wheat to cut. The weather is just right for cutting but owing to a few days of rain harvest has been delayed to the extent that some of the grain is over-ripe—a few hot days would cause it to shell. And then the binder breaks down! It may be just a small part that has broken, but until it is replaced the binder must stand idle in the field and is no better than no machine at all for the time being. If he has a phone, the farmer calls up his local dealer and orders a new part; if he hasn't got a phone he hitches up his team or jumps into his flivver and burns up the road to town—he must get the necessary repair part for that binder right away! A delay might prove disastrous.

And now what happens if the dealer doesn't happen to have the particular part wanted in stock? Every dealer knows what happens. The farmer fumes and sweats and cusses, while the dealer, maybe, digs around in his repair bins hunting for a part that he knows he hasn't got in stock. The agent finally confesses that he'll have to order the part from the nearest branch house or factory. It may mean a delay of a few hours or a few days—possibly a week—depending on the distance of the branch house or factory from the agent.

THE farmer goes back home empty-handed, cussing binder, the dealer and the manufacturer. His harvest is at a stand-still waiting for that measly little repair part. There may be an oxy-acetylene welder or machine shop in town where the broken part can be mended, but if not the farmer is taking serious chances with his crop. While he is waiting for the necessary repairs a hail-storm is quite likely to come along and flatten his grain; or a few days of scorching hot weather may cause the grain to shell.

The farmer suffers through lost time and a short crop; the local dealer suffers through loss of the farmer's goodwill and confidence; the manufacturer and agent both suffer because the farmer will tell his neighbors that the binder is no good, although it may have already given him several seasons of satisfactory service and the breakage may have been due to an excessively worn part that should have been replaced before the farmer began his harvest.

A farmer can often forestall breakage and incidental delays by going over his machines carefully, during rainy days or slack periods, and replacing all badly worn parts. But the farmer is just like the rest of us—he usually puts it off until the last minute—and then it's too late and there's the very dickens to pay for everybody concerned—*unless the dealer has anticipated the needs of his trade in advance and has made provisions accordingly.*

IT is undoubtedly a fact that many farm implement dealers and agents regard selling repairs as an annoying evil to be borne with, while it is, in reality, a *sales opportunity* of great importance. The goodwill and confidence of the farmer hinge upon the *service* the local dealer is in position to give. If the agent is well posted on the machines he sells and explains the advantages, care and adjustments of the machines before they leave his implement warehouse, if he makes it a point to know how to properly set up the machines he sells and sees to it that they are set up that way and in good working order before being delivered to the purchaser, if he stocks sufficient repairs to take care of the seasonable needs of the farmers in his community, if he is in a position to supply expert repair service to the farmer in the field—if he can do all these things he is giving service of the first water and need not worry over his future success. He has taken advantage of a *sales opportunity—service*—netting him goodwill and future sales instead of trouble and lost sales. The dealer should anticipate the needs of his customers—especially in the matter of repairs.

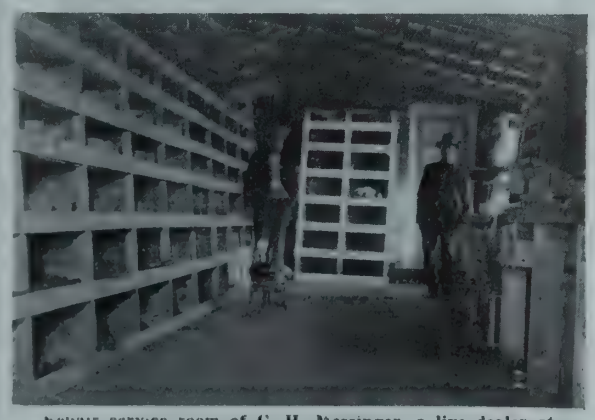
And this is where the manufacturer whose goods the dealer handles should co-operate. It often happens that the agent has taken on a new line with which he is not thoroughly familiar. He doesn't know what parts will be needed most for repairs; or he may feel that he is not financially able to lay in a sufficient stock of repairs to meet the requirements of his trade.

THE ideal arrangement to meet these conditions would be for the manufacturer to have an expert on repairs visit the dealer and make up his order for repairs. If the agent could give him an estimate as to the number of machines in use in the community, the expert would be able to make up an order that should fully meet the repair needs of the farmers in that

Repair service room of Messrs. Edwards & King, Odessa and Kindal, Sask. They do not have to HUNT for their repair parts.

locality. The manufacturer should ship the stocks of repairs ordered by the repair expert to the dealer on the basis that at the end of the year all unsold goods would be carried over by the manufacturer, at the manufacturer's expense, thus relieving the agent of the burden of investing capital in surplus stocks that he could not well afford to carry. By adjusting the burden in this way the farmer would be getting good repair service and the dealer and manufacturer would sell more machines.

The stocking of repairs, however, is not always the only repair service problem. It often happens that owing to lack of system in his implement store a dealer will have certain needed repairs on hand and not know it—or be unable to find them when called for. He may have a dozen different kinds of parts thrown together in a bin and nothing to show the contents of the



Repair service room of C. H. Messinger, a live dealer at Carmangay, Alberta. This shows a neat, systematic arrangement.

bin. When a farmer comes in and asks for a certain part the dealer hunts through his bins of assorted repairs—and maybe he finds the desired part and perhaps he doesn't. At any rate, he wastes both his own time and that of the farmer—and perhaps he winds up by sending away to the nearest branch house or factory for a part that he later finds he has a good supply of tucked away on a shelf in a dark corner, that he overlooked before.

THE "hunt system" is a relic of the dark ages and is a symbol of waste. "System" is a saver of time and money and is a promoter of progress and prosperity. And this is another matter in which the manufacturer can help the dealer.

Repair parts bins should be classified according to machines and the factory numbers of the parts kept in them and should be arranged in numerical order. For instance, if the first bin contained parts X-1 to X-25, bin No. 2 would have X-26 to X-45—and so on. A current issue repair catalog should be kept on hand, preferably suspended by a piece of twine nailed to a shelf bin—in each machine classification of bins so that the dealer can look up the price of any part without loss of time. A card should be tacked on the partition above or between each bin showing the contents of the bin arranged in a neat column—the number of pieces of each part carried in stock. And when a piece is sold out of a bin, the original number carried in stock should be crossed out and the latest total on hand jotted down. This amounts to a perpetual inventory and while it takes a little more time on each individual sale, it saves time and money in the long run. The dealer knows when his stock is running low and can tell by consulting the card whether or not he has the part wanted in stock without wasting time hunting for it. This perpetual inventory also makes the matter of taking annual inventory a very simple matter.

THE implement dealer who gives as much attention to properly supplying his trade with necessary repairs as he does to selling new machines and implements is usually the successful agent in his community, for the farmer appreciates *service.* It is the big word of to-day in every successful commercial enterprise.

The dealer who carries a good stock of repairs will find this service to the farmer a real sales asset. Farmers will come from thirty or forty miles around to buy from him, passing up the dealers at intermediate points who do not carry a full line of repairs. And often—very frequently, in fact—the farmer comes to buy repairs—and remains to buy machines. That is making two dollars blossom where only one was expected to bloom.

FARMERS EASILY MAKE CARS EARN THEIR COST

The farmer's car should be made to earn its cost and keep. By slight adaptations corn may be shelled, water pumped, posts sawn, butter churned, and hosts of other agricultural and domestic jobs done.

Picture the farmer coming back from town after a pleasant run in his automobile.

"What is the program for to-day?" inquires the farmer as he sees his foreman in the yard on his return.

"There is a big program of work to-day," replies the foreman, "and I am glad to see that the car is going fine. We have to see that the butter goes to market in the morning, saw about fifty fence posts for that new pasture field, shell 100 bushels of corn, and grind some feed, and in addition we ought to pump up a little more water into the tank."

How can this be done?

The farmer backs his automobile up a short distance from the saw, which is a circular one and located near the woodshed. The foreman pushes an iron frame-work with a cross shaft of steel, having a fixed pulley at each end and a movable pulley in the middle, under the rear axle of the automobile. Then he pushes down the crossbar of the tilted frame; this lifts the rear wheels off the ground, and when the cross-bar reaches the ground the rear axle of the car slides down the inclined brace of the frame, until the tires of the rear wheels come to rest against the two 8-in. drive pulleys at the end of the shaft. The drive belt of the circular saw is slung around the pulley in the middle of the shaft, the proper adjustment is made, and a few minutes later the buzz saw, driven by the car wheels, is cutting through the logs.

By use of the same contrivance, the rest of the work outlined at the beginning of this item may be satisfactorily and efficiently accomplished.

How many miles have you run your tractor? Do you run it a thousand miles a year—or more?—or less? A farmer in Vaughan township, Ontario, writes us to say that he has run his 8-16 tractor on his 150-acre farm 3,000 miles during the past three years.

Automotive Dealers Should Boost For Good Roads

Attend the Congress this Month in Quebec City if You Can

By R. HOLMES PARSON

THE forthcoming convention of the Canadian Good Roads Association, which is to take place in the Parliament Building at Quebec from May 20 till May 22 inclusive, should be of particular interest to every dealer connected with the automobile industry, whether it be autos, trucks or tractors, because it is only through the development of improved highways throughout the Dominion that the field for this comparatively new industry can be enlarged. Agriculture is at the head of the list of the industries of Canada, and anything that will help to encourage production from the land brings with it the extension of those industries that serve the land.

The great war, now happily concluded, demonstrated to the world the possibilities of motor traction, and no one will gainsay the fact that without the assistance that was given by the automobile engine, whether it was in the ponderous tank or the powerful aeroplane, in the armored car or the invaluable supply truck, the armies of the Allies could not have advanced as they did. And it was the improved highways of France that enabled the possibilities of this system of motive power to be effectively demonstrated.

But now that the sword is once more being turned into the ploughshare, and the world is seeking to restore its peace activities, the value of motor traction is being realized by every class of the community, and at the same time, as a necessary corollary, improved roads are being demanded in order that full advantage may be taken of this aid to production. The farmers' sons who have come back from "over there," full of enthusiasm for the labor-saving devices which the necessities of war called into existence, realize that it is no good installing tractors to aid in the ploughing of their fertile acres so as to get bigger crops at less cost of labor, if the roads that lead to their farms, and are the "means of communication" with the railways or the market towns, are impassable for weeks and months at a time, just when their particular products are most needed. The increased production is of no value if it has to remain in the barns until the roads are solid enough to bear the weight of the lumbering farm wagon, and the farmer can spare his horses and men sufficiently long to enable them to make the haul to market.

WITH the advent of the motor truck, manufactured in such variety of size and power as to suit every requirement, the farmer has the opportunity of getting rid of his product profitably with a minimum of labor and expense, and hundreds and thousands of them have adopted this method of transportation—because they have the improved highways on which to use them. Without those highways the motor trucks are of little use, for wonderful as is the power that is developed under the bonnet of the car, it has its limitations, and if there is nothing on which the wheels can secure traction the most powerful engines in the world are useless as a haulage machine.

It is almost unnecessary, in these days when practically every class of the community realizes the part which motor vehicles are to play in the transportation of the future, to give any illustrations of how the motor industry, the farmer and good roads are intermingled, but those who were at the last Canadian Good Roads Convention at Hamilton will recall the story that W. A. McLean, the Deputy Minister of Highways for Ontario, told at one of the sessions. He recalled that a farmer who resides twelve miles from the market centre of Toronto used to get up at 3.30 in the morning, feed his horses and get started for town by about five o'clock. He had to spend two hours or so in town to rest his horses if the roads were good and longer if they were bad, and was fortunate if he returned home by noon. From 3.30 to noon his horses were finished with for the day. An improved highway was built that passed by his farm and the farmer immediately purchased a small truck. Now he gets up at five, starts from home at six, in the city by seven, through with his business by eight, and home again by nine. His horses had been standing in the stable, he was not tired, and was able to go on with his day's work of production. That is an experience which is being duplicated all over the continent.

Another speaker at that convention told of how farmers who used to supply a city with large quantities of milk had to haul it to the railroad station, where it was transported to the city at a cost of a cent a gallon, and they had to go to the station again in the afternoon to fetch back the empty cans. An improved highway was built and four or five farmers banded together, purchased a truck, and their milk was collected by the truck driver, taken direct to the city and the empties brought back to their farms, at a cost of half a cent a gallon, and the saving of the time and labor formerly expended to go to and from the railway station twice a day. There again, without good roads, the advantage of a motor truck would be nil, and dealers in motor vehicles, realizing this, are among the most enthusiastic supporters of improved highways.

THERE will be hundreds of delegates at the forthcoming convention who are interested in agriculture, and scores who are interested in motor traction and modern machinery, and the congress, which is being held under the official auspices of the Ontario, Quebec, Nova Scotia and other Provincial Governments, will provide a splendid opportunity for them to get together and discuss ways and means of helping each other and advancing their respective industries at the same time as they advance the general well-being of the community.

WILLIAM HYSLOP, Jr.

William Hyslop, jr., president of Hyslop Bros., Ltd., and also of the Cadillac Motors, Ltd., Montreal, died at Wellesley hospital, April 26, following an acute attack of influenza.

He was born in Hamilton, Ont., in 1871, and began his business career in Toronto in 1888 with his father, but in 1890 he established the bicycle business that now bears his name.

He became interested in the automobile business about 1900, and was recognized as an acknowledged authority on motor cars. He married Margaret McLeod, daughter of William C. McLeod, on July 5, 1894, and leaves a son and daughter.

Prominent as he was in business, Mr. Hyslop found time to be equally prominent in athletics.

In a report that was issued by the Public Roads and Highways Commission in the early days of the war, the statement was made that the commissioners believed there was impending a revolution in farm operations. The pack horse of two centuries ago had been replaced by the farm wagon, and this in turn was being replaced by the motor truck. "This method of transportation," says the report, "presents some at least of the features esential to profitable use by farmers; it conveys loads of a size so moderate that a single farm can furnish one or more than one, yet so large as to outclass the old horse-drawn wagon; it requires, not specialized tracks like railways, but a common highway, albeit improved to a standard within the reach of the community; it is free from the difficulties of traffic adjustment which have made the conduct of railways a business by itself, and a peculiarly difficult business. In short, it is an individualistic method of transportation and thus commends itself to farming, the most independent and individualistic occupation in the world.

"Public attention at present tends to fasten upon the pleasure car, but your commissioners find themselves much more interested in those vehicles, some designed for the transportation of passengers, some for the carriage of freight, which they are persuaded before long will be in general use by the farmers of the Province. They suspect indeed that the days of the use of the motor car for mere pleasure already are numbered; that in another decade the joy riding may be done in the air, and the automobile will be neglected to the purposes of sober labor. Already there are cheap motor cars to be obtained; the farmer of to-day can procure one of these with as little straining of his resources as his grandfather could a top-buggy; and it is but reasonable to expect a further lowering of the price. In this beneficent revolution good roads must play a necessary and important part."

To the dealer in passenger cars there is no need to advance any arguments as to why he should be interested in good roads. The very fact that the motor industry has grown so rapidly in the last decade is due mainly to the provision of highways over which they can be used. Every automobile organization throughout the country is taking a prominent part in the movement for the extension of good roads, and the indications are that with this extension the number of car purchasers, whether for business or pleasure, will be greatly augmented.

At the coming convention there will be many topics discussed relating to the motor industry, and not the least interesting will be one by W. A. McLean, Deputy Minister of Highways for Ontario, who will give an address on "Shall we restrict the load or build the road?" It is a subject open to a lot of argument, and those who have an interest in the motor industry should be on hand to give the many sound reasons that they undoubtedly have why restrictions should not be practised, but that roads with stronger foundations and harder surfaces should be constructed. Another topic of interest is that of keeping the highways open in winter. This will be introduced by the Hon. Frank Carrel, of Quebec, and seeing that the main highways in the United States have been kept open for motor traffic for 365 days in the year with much success, the delegates to the convention will consider the desirability of urging on Canadian Provincial Governments similar action.

The program of the convention announces that Sir William Hearst, Prime Minister of Ontario; Sir Lomer Gouin, Prime Minister of Quebec; the Hon. J. D. Reid, Federal Minister of Highways; the Hon. A. Veniot, Minister of Public Works, New Brunswick; the Hon. Findlay McDiarmid, Minister of Highways, Ontario, together with a number of other ministers from the various Provinces, will attend, and the secretary, George A. McNamee, of 909 New Birks Building, Montreal, has received a host of acceptances for the congress from prominent speakers and public men from all parts of the North American Continent.

Wide Tractors *vs.* Narrow Tractors:

By J. D. WHITE
Sales-Manager of the
Emerson-Brantingham Co.

The Viewpoint of Those Who Say "Keep the Drive Wheel Out of the Furrow"

SOME manufacturers of tractors make quite a talking point of the spur gear construction, but they do not call attention to the fact that this construction not only throws more torsional strain on the crank shaft but makes it necessary to set the engine crossways of the frame of the tractor, which results in a very wide tractor construction. Then, with the wide construction, to get away from the side draft they put one drive wheel in the furrow. They run their tractor during its entire plowing life on a side hill so to speak. They force a continued grind on the differential by reason of the extra slippage of the drive wheel in the furrow over the drive wheel on the land. They continually decrease the available plant food in that part of the soil which comes in contact with the drive wheel in the furrow. One of the strongest objections that has ever been raised to the use of tractors on the farm is the packing of the soil, and this prejudice has been largely caused from the fact that the first tractors were very heavy weight, and consequently the effect of the soil packing was readily noticed in the crop yield.

There isn't any question but that when the soil is wet, unusual pressure so compacts and solidifies the soil particles that it will be several years before the action of the air and moisture will disintegrate these particles to such extent that the soil is back in its original plant food form.

As first stated above, in order to simplify tractor construction, many manufacturers are marketing tractors with the width from outside to outside of drive wheel of six to eight feet, but with sufficient power to pull not more than three fourteen-inch bottoms, and with such a tractor it is absolutely necessary to run one drive wheel in the furrow. Regardless of any system of lugs that can be put on the drive wheel, it cannot be successfully denied that the wheel running in the bottom of the furrow, where the ground is moist, does interfere with the plant food properties of that part of the soil which comes in contact with the face of the drive wheel. *However, the effect on the soil is far less serious than the effect on the tractor.* Very few tractors are designed with a view to running one side lower than the other. With one drive wheel in the furrow, the tractor is really working on a side hill all the time, and working on a side hill we know that the greater portion of the load is carried on the lower wheel, consequently that side of the tractor will wear out first. Furthermore, all who have observed tractors running with one drive wheel in the furrow, have noticed much greater slippage from the wheel in the furrow than from the wheel on the land, with the result that there is a constant grinding out of the differential, so that from the point of view of the tractor it is entirely reasonable to figure that with one wheel running in the furrow, the life of the tractor is very greatly reduced, as is also the effectiveness of the splash system of lubrication which is recognized as the most economical and least liable to cause serious trouble, when one side is running continually lower than the other.

TO hitch a three fourteen-inch bottom plow successfully behind a tractor, and have the drive wheels of the tractor on the land, the tractor cannot measure from outside of rear wheels over sixty inches. Take for example a tractor sixty inches from outside to outside of drive wheel, and the centre of the tractor would be thirty inches from the outside of the driver. Running both wheels on the land, we must allow about four inches from the outside edge of the drive wheel to the furrow to get perfect footing. Therefore the centre of our power is thirty-four inches from the furrow bank. With gangs of plows, with one bottom necessarily sufficiently far behind the other to afford clearance for trash, we do not find our centre of load directly in the centre of the plow, but as near as we can locate, we can figure on a 2-bottom plow that the load is two inches to the left of the centre of the plow.

To hitch a three fourteen-inch bottom plow successfully behind a tractor, and have the drive wheels of the tractor on the land, the tractor cannot measure from outside to outside of rear wheels over sixty inches.

On a 3-bottom plow, three inches to the left, and on a 4-bottom plow, four inches to the left.

As outlined above, with the centre of our power thirty-four inches from the furrow, with three 14-inch plows cutting forty-two inches wide, the centre of the plow would be twenty-one inches from the furrow, but allowing three inches to the left of the centre of the plow for the centre of the load by reason of the fact that the plow bottoms on the lefthand side are farther back than on the righthand side, we get the centre of our load twenty-four inches from the furrow bank, and therefore we have, when using three bottoms, only ten inches side draft angle, with a tractor sixty inches from outside to outside of drive wheel, and if conditions are such that we can run the drive wheel closer to the furrow than four inches, we can shorten this side draft angle by every inch closer to the furrow that we may get.

With plows equipped with magazine, oil-tight, dust-proof wheel boxes, we can so set them as to carry the greater portion of this ten inches side draft on the wheels of the plow, and at least with ten inches side draft, six inches should be carried on the plow and not to exceed four inches on the tractor. If we have a tractor sixty inches from outside to outside of drive wheels, with sufficient power to pull a 4-bottom plow, we then have practically a straight line of draft, as the centre of the load would be thirty-two inches from the furrow, and we now have the most ideal outfit that can be devised, so far as side draft is concerned.

AS to the effect of side draft on the power, up to the present time no definite data are obtainable. Prof. White of the Illinois State University has made some experiments in this direction and is contemplating additional experiments. His conclusions are that side draft increases the power necessary to plow sometimes as much as 15 per cent. and no doubt before long we can have a scale that will enable us to figure how much added power we must have for every inch side draft there is between the load and the power, and when this time comes tractor manufacturers will pay more attention to the width of their tractors on the ground, and tractors will be built with sufficient power to cut out their width. In other words, a tractor sixty inches from outside to outside of drive wheels will have sufficient power to pull four fourteen-inch bottoms under favorable conditions, only making it necessary to cut down to three bottoms under very difficult conditions.

In tractor plows, as well as in horse plows, many hitch devices have been designed for the elimination of side draft, but all mechanics know that the line of draft runs direct from the centre of the power to the centre of the load, and the only way a load can be made to pull straight ahead when hitched to one corner is to have it on a track or guided by wheels or other means that will counteract the side pull. The ideal construction, then, for the tractor and the plow is to have the tractor sufficiently narrow on the ground that it will have ample power to plow out its own width or pull sufficient plows that the centre of the power will be in line with the centre of the load, without running one drive wheel in the furrow, which as outlined above is not only shortening the life of the tractor, but decreasing the available plant food in the soil. Tractors with sufficient power to run on the land without side draft when pulling the plow are on the market, but they are altogether fewer in number than will be the case in years to come when farm operators realize the advantage of the drive wheel on the land and the freedom from side draft between the tractor and the plow.

In this case both wheels are on the land and relieve the strain on the differentials and steering gear.

"AUTO TITLES" OFFICE

Automobile agents and owners in Saskatoon are discussing the establishment of an "Automobile Title" office similar to the Land Titles office. This would provide for a registration bureau for automobile owners, where cars would be registered the same as city property and the proprietors would be given title. Thus, when a car is sold, the vendor would be obliged to produce satisfactory documentary evidence to show that he is the rightful owner, and that no strings are attached to his ownership.

Automobiles and Trucks: A Useful Garage Idea; A Luxurious Motor Pullman; Pushing Truck Sales

These pipes carry off exhaust fumes.

AN exhaust pipe system which should appeal to every garage proprietor and repair shop man is shown in the unique photograph on this page. By this means the exhaust fumes are carried off when the engines are operated indoors. A long pipe is supplied with several laterals which are connected to the exhaust pipes of the cars by means of flexible couplings. The arrangement is one that might easily be adopted in almost any public or private garage.

The value of this installation is obvious in winter, but the wise garage man who appreciates its merits will not wait until winter sets in to arrange for the installation. He will plan it *now*.

This system is installed in one of the most up-to-date plants on the continent—that of the Nordyke and Marmon, Meredian and Eleventh streets, Indianapolis. A few days ago the editor of CANADIAN MOTOR, TRACTOR AND IMPLEMENT TRADE JOURNAL, asked the Indianapolis concern to tell our readers how this works, and their estimate of its value. Here is what A. B. Wagner, the manager writes us:

"This exhaust pipe system is absolutely practical and indispensable in a large repair shop in the winter time when it is necessary to keep all windows and doors closed. The photograph shows the system as it was first installed with the two-inch exhaust line. We have since found that six cars exhausting in this line created so much pressure that the two-inch line could not carry it off. We have since enlarged the line, using four-inch pipe and this works fine.

"Each of the six connections is equipped with two-inch globe valves so that in case part of the lines is not in use these can be shut off. The two-inch connecting lines are made so that when not in use they can be swung back under the main line. The first length of this line is all solid pipe, then there is a short length of flexible metal tubing which terminates into a sleeve which slips over the end of a muffler.

"In this way our attachments can be made very quickly and the car muffler itself cuts down the noise so that it is not objectionable to our neighbors."

TRUCKS IN SMALL TOWNS

THE possibilities of efficient transportation by means of the motor truck are being realized more than ever before. Throughout the country car dealers of keen vision follow the development of the new industry and eagerly grasp the bright opportunities that it offers to them.

That this enthusiasm is founded on sound business judgment is proved by the fact that when the war crippled railway transportation, many of the largest manufacturers, wholesalers and retailers who have kept track of their cartage costs with more or less accuracy, were the first to welcome the advent of the truck as a freight carrier and to prove its efficiency by putting it to the test of service. The truck stood the test successfully and its sponsors won the profits resulting from speeded-up business; prestige among their customers, gained by improved service and deliveries; and reduction in their operating expenses.

It was not necessary to sell the truck idea to the manufacturers and others just mentioned, they were ready and waiting; and large car dealers backed with plenty of money, and experience in the sale of passenger cars as well as facilities for rendering service, easily secured for themselves positions of prominence in the sale of trucks.

BUT in the smaller towns most dealers did not realize the possibilities of the truck, for the reason that as a general rule small business houses do not keep track of their cartage expenses, nor do they study very seriously the efficiency of their workers or the service that is rendered to their customers. Thus truck sales have not come to the country dealer automatically, as they did to the city dealer.

But the demand for trucks in the operation of small business exists, though it may be latent, and in this case the country dealer can do much to arouse the interest that will stimulate demand and make himself a pioneer in a most profitable undertaking.

The truck dealer will, however, find that the most lucrative field for his energy will be the farmer himself, for this man's ability to dispose of his goods at a profit above what he has been able to realize in the past depends on his finding new markets and supplying them plentifully and regularly, and selling at a lower cost than previously.

The progressive general storekeeper who for years has been forced to compete on unequal footing with the big mail-order houses for the farmers' business will readily see in the truck a trusty ally that will enable him to make rapid deliveries over extensive areas and carry his name into territory that has hitherto been visited only by the bulky catalogue.

N. S. CAR WESTERN AGENCIES

HAMILTON, Ont.—Trade conditions in Canada were never better than at the present time, says J. L. Acker, sales manager of the National Steel Car Company, Limited, of Hamilton, Ont. This encouraging report is the result of a recent successful trip to the Pacific Coast. Mr. Acker returned enthusiastic with the Western outlook, especially for the motor truck business. His trip lasted five weeks, and he was successful in establishing National truck branches in charge of the largest automobile dealers in the principal Western cities.

In Saskatoon the National representatives are the Smith Motor Truck Sales Company, Limited.

In Winnipeg, the Western Canada Motor Company, Limited.

In Vancouver, the Sigmore Motor Company, Limited.

The Calgary representatives will be Messrs. Peacock & Leeson, and a garage and service station to take care of National trucks exclusively, costing $40,000, is being erected in that city.

GENERAL MOTORS' PLANS

General Motors, Ltd., who contemplate spending several million dollars in a Walkerville plant, under date of April 28, write the *Canadian Motor Tractor and Implement Trade Journal*, to say:

The initial Walkerville plans call for a 200 x 600 single story saw tooth manufacturing plant. This will be used for manufacturing motors and axles. Other plants to follow this one will possibly include passenger car and truck units.

The Canadian plant will not only be Canadian in name but in fact, and it is the desire of General Motors to co-operate to the fullest extent with Canadian labor and Canadian material.

The importance of better accounting by dealers in the implement, tractor and accessories business was emphasized at a recent convention of dealers in these lines held at Minneapolis.

For the motor car owner with plenty of that useful adjunct known as money, there is no limit to the luxury in which he may travel. He may even, as with the family pictured above, have his own motor Pullman coach, wherein to cruise the roads of the entire country, free from all considerations of when and where, relieved of all necessity for coming into intimate contact with his fellows, except on precisely the terms he shall elect. This private motor Pullman has literally all the comforts of home. Its beds are as comfortable as the biggest four poster. It has a tidy little kitchenette, a bath, seats that are as luxurious as the big leather armchairs in the library at home. The caravan cult has a strong following in England, but it is only just beginning to get a foothold in this country. With such possibilities as the one shown above, there is reason to hope that motor caravaning may become a popular American sport. The caravan is built on a Bessemer truck chassis, which has proved admirably adapted to the purpose.

HELP US TO ACHIEVE CANADIAN HAYING EFFICIENCY

Always in the forefront—**Deering** and **McCormick Haying Machines** have been so closely followed in their work by the eyes of skilled and practical men who have developed improvements to meet all field conditions that loyal users know them to be in a class by themselves.

Deering and **McCormick** mowers can be depended on to cut without clogging or waste, day after day and year after year. The cutter bar on these machines adapts itself to the ground, rising and falling, leaving the stubble smooth and short. Built of materials that are always first-class, they reach a good old age with every part functioning smoothly and well, with little need for any doctoring.

With these should be considered the other machines that go to make up the International Harvester line for haying time requirements. **Deering** and **McCormick** rakes and tedders, and **International** combined side delivery rakes and tedders, and **International** hay loaders, etc., are prime favorites. Durability, ease of operation and satisfactory work in all the details that go to make up haying success are qualities that your customers will look for in these tools——and find!

It is understood among farmers that with all these machines goes **International service**—so alert and intelligent that loss of time through replacements or adjustments is reduced to a minimum. This is an important item. This is a big factor in easy selling. Tie to the **Deering** or **McCormick** line of haying machines. Get in touch with the nearest branch house listed below for any information you may need.

International Harvester Company of Canada, Limited

Branch Houses

WEST—Brandon, Man., Calgary, Alta., Edmonton, Alta., Estevan, Sask., Lethbridge, Alta., N. Battleford, Sask., Regina, Sask., Saskatoon, Sask., Winnipeg, Man., Yorkton, Sask.

EAST—Hamilton, Ont., London, Ont., Montreal, Que., Ottawa, Ont., Quebec, Que., St. John, N.B.

Manitoba Has New Implement Act

Manitoba's Implement Act comes into force June 2, 1919, having passed its various readings at the recent session of the Legislature. Until June 1 the present contract forms can be used.

UNDER the reading of the act, an "implement" means any and every implement or machine with a selling price of $30 or more.

Large implements are traction and portable engines of any kind, having a capacity of at least 5 h.p. This definition covers threshing separators, engine plows, engine discs, etc., and may be added to at the will of the legislature.

Small implements incorporate mowers, binders and all other implements other than those entitled "large." The act applies to the sale of all implements in Manitoba.

Vendors selling large implements must file annually, before February 1st, a list of their lines, giving in the case of tractors both the brake and drawbar horsepower. Such lists must show the retail price of the implements, both cash and credit, also must specify the usual length and terms of credit and the rates of interest before and after maturity. In like manner, "small" implements must be listed, with price quotations and terms, as in the case of the "large" implements.

All vendors must file with the Government, annually, a list of all repairs sold by them, giving the selling price of each part and the place within the province where such repairs may be obtained. Penalties are provided against all firms who do not file such lists. It is important, from the dealer's standpoint, to note that no repair must be sold at a higher price than the price stated on the list, or lists, of the manufacturer or wholesaler. Any dealer charging a price higher than list for a repair is liable to a fine of $25. Sections 5, 6, 7, 8 of the act do not apply to dealers, as they specifically deal with the filing of data regarding the lines sold and repairs for same.

Large implements are sold (on cash or credit), according to Form A in the act. Form B covers small implements, and Form C second-hand implements. Form A must not be used for second-hand or rebuilt implements. Regarding repairs, should no place of the vendor be stated, the purchaser may return broken parts to the nearest agent of the vendor. Assuming that no repair point is mentioned, the vendor or his agent are held to be responsible for carrying such repairs.

Before signing a contract same must be read over and explained to any purchaser in a language which he understands. In any action, the burden of proving said contract is upon the dealer, who will evidently have to be somewhat of a linguist. In this connection, an affidavit made before a notary public, justice of peace or commissioner or B.R. to the effect that vendor has explained contract to the satisfaction of the purchaser will be held as conclusive evidence in all courts of proof of the facts sworn. Contracts made by correspondence are eliminated from the necessity of comprehension proof by purchaser.

No contract signed by purchaser is binding unless and until signed by the vendor or his agent, or until such contract be delivered to purchaser, or sent him by registered mail, unless in the case of machinery paid in full at time of delivery. Any purchaser may make any payment to any sale or collection agent of the vendor within the province, unless the contract otherwise provides.

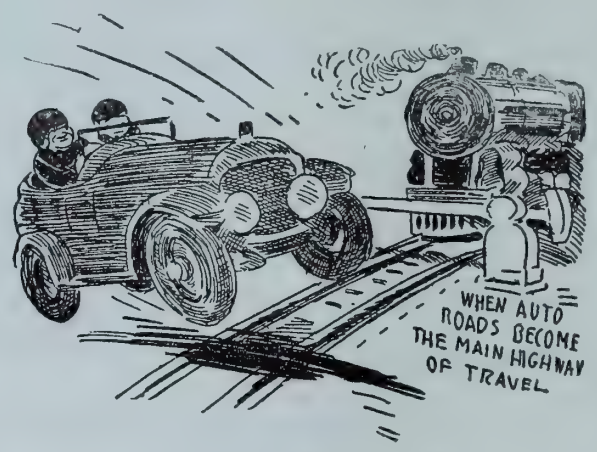
The vendor shall have a lien upon the implement for the unpaid purchase money only in the event that such lien is specified in a lien note taken for total value or balance of value of the machine. Where vendor takes a note the title to implement remains with him until full payment is made. The purchaser can use the implement, but is responsible for damage to, or destruction of same. Upon default of payment of purchase price or installment thereof, or if purchaser gives implement to a third party, without consent of vendor, the vendor may take possession of the implement. When the vendor repossesses a small implement he is liable to purchaser for the amount of resale price less expenses for repossession, or necessary repairs and expense of selling the implement, but recovers balance due him if such balance exists.

In the case of large implements being repossessed, the value of same must be determined by arbitration if vendor and purchaser cannot agree. Within ten days of repossession the vendor must deliver to purchaser a notice in writing stating his valuation of the machine and giving a time within which the purchaser may object to such valuation. Within that time the purchaser must state his valuation, or the valuation of the vendor is held fixed and correct. In the event of disagreement on valuation, both parties appoint an arbitrator, and the two arbitrators appoint a third. Notice of appointment of arbitrator must be given the vendor and purchaser, by both. The award of the arbitrators is final, and we advise dealers in Manitoba to closely read the sections dealing with this feature. See Section 21, Sub-sections 1 to 17 of the act.

This is especially important because of the method to be followed in repossession.

When a purchaser buys two or more large implements at the same time from the same vendor, whether by one or more orders, with the intention that these are part of an outfit (such as tractor, plow and separator) the purchaser, under terms of the contract, may reject any one or all of the implements providing that such intention be expressed in one of the contracts of purchase.

No assignment of the earnings of an implement in favor of vendor shall exceed more than 25 per cent. of such earnings. Notice of claim on earnings come under the provisions of the Threshers' Lien Act, and



"Oh, Boy! Them'll be the days!"

under these provisions a claim of 25 per cent. has priority. In the case of a separator, the dealer shall to the extent of his interest in the earnings have the same lien upon the grain threshed as the thresher would have under the Threshers' Lien Act.

When a sales contract is made upon the legal from the same, together with the lien note or notes, shall be held to constitute the entire contract between the parties.

A schedule appended to the act gives the wording and clauses of the forms to be used. Form A (large implements) provides for cash or time payment and discount provisions, if any. By the contract vendor warrants the machinery to do its work if properly used and operated. If purchaser cannot operate the machine efficiently he must advise vendor within three days. Upon receipt of notice vendor has eight days to make the machine do its work properly. If not made efficient within that period, the purchaser may reject the machine, and obtain repayment of money and return of notes, but must so advise the vendor by registered mail. The vendor warrants the machine durable with proper usage. Parts are replaced free within one year if faulty through defect of workmanship or material. The vendor further warrants that repairs for the machine will be kept at a specified point in Manitoba for a period of ten years from date of order. In the case of tractors or engines over 5 h.p. the vendor warrants, by the contract, that the engine, if properly operated, is capable of developing continuously the horse-power at which it is rated. The contract provides for the insertion of both the belt and drawbar rated capacity of a tractor. Any further warranties may be added by the vendor that he wishes.

The contract embodies the terms of assignment of earnings dealt with in this article, also the fact that so long as the purchaser may reject the machinery he must agree to keep same insured at its full insurable value in favor of vendor. Should he not do so vendor may insure the machinery and add the expense to the purchase price. The vendor, should machine be seized for payment of taxes, can pay same and costs, adding such expense to contract, with interest. In the case of the sale of "large" implements, same must be specified and described in the body of the contract.

Form "B."—In the case of "small" implements, the vendor by contract warrants quality and efficiency of the machine. Breakages due to faulty material or workmanship must be replaced free of charge if within one year from date of purchase. A trial of two days is allowed purchaser to make machine work, or within that time notice must be given vendor of its inefficiency to live up to warranty. A "reasonable" time is allowed vendor or his agent to make the implement or machine do good work. In the case of both large and small implements, continued possession and failure to advise the dealer of their inefficiency to live up to contract, warranty is held to be conclusive evidence that the goods or machines fulfil the warranty.

Form "C" deals specifically with the sale of second-hand or rebuilt implements. Dealers should pay due attention to the fact that every machine or device used, or intended for use upon any farm, with a selling value of $30 or over, comes under the scope of this act respecting the sale of farm implements in the Province of Manitoba.

DISCOUNT FOR VETERANS

The Returned Soldiers' Settlement Board at Ottawa, of which Captain Wm. C. Chandos Innes, is director of equipment, has been working energetically since its recent organization in the interest of the great war veterans for whose benefit it was established. Among other things, through the efforts of Captain Innes, several leading manufacturers of farm machinery have agreed to sell machinery to soldier settlers at rock-bottom prices.

The sale of farm machinery to soldiers under the new plan will be handled entirely through the offices of the Settlement Board, these offices being located at Winnipeg, Regina, Edmonton, Saskatoon, Calgary, and Prince Albert, Sask., in the West; and Toronto, Montreal, St. John, Halifax and Charlottetown in Eastern Canada, with the main office at Ottawa. Each branch office will be in charge of a provincial supervisor.

Soldiers desiring to take up land and purchase necessary equipment to put the land on a paying basis in the shortest length of time, will file their applications with the nearest Soldiers' Settlement Board office. Upon approval of the application by the supervisor, the applicant will be referred to a local implement agent in the community where he plans to settle. This agent will furnish the soldier with equipment called for and will take the soldier's receipt for goods purchased. The agent makes his settlement with the manufacturer and both the manufacturer and soldier make settlement with the Returned Soldiers' Settlement Board.

The following firms are included: Massey-Harris Co., Ltd.; Cockshutt Plow Co., Ltd.; Frost & Wood Co., Ltd.; International Harvester Co., Ltd.; J. Fleury's Sons, Ltd.; John Deere Plow Co.; Tudhope-Anderson Co.

For the Prairie Provinces, the United Grain Growers, Limited, have offered special prices on all agricultural implements, wagons, harness and any other goods handled by them.

Particular attention has been given by the board to the question of harness. Valuable suggestions were submitted by experienced farmers and agricultural authorities, and a standardized harness has been adopted, which will meet all needs of the farmer, thus avoiding the expense of duplication. This standard harness can be secured by settlers at $31.50 at the point of manufacture, i.e., Winnipeg, Toronto and Montreal. Except for breechings, the harness is complete, including collars. Settlers requiring breechings to match this standardized harness may obtain them at a cost of $11.50 per set at point of manufacture.

This harness will be supplied by the Great West Saddlery Co., Ltd.; Carriage Factories, Limited; La-Montagne, Ltd.; Messrs. Beal Bros.; and also other manufacturers of harness, as soon as arrangements can be made. These companies also have offered a considerable reduction on their regular lines of harness, blankets, etc.

The Richards-Wilcox Canadian Co., Ltd., has made arrangements for concessions on hardware, grindstones, etc.

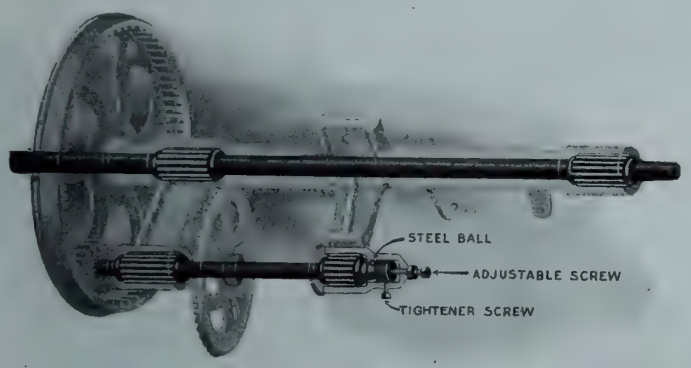
The discounts vary from 10 to 25 per cent., offered by the various companies

Hay Making Machinery

Many a farmer has seen a hay crop lost just because at a critical time a Mower or a Rake, etc., gave out on its owner. That lesson, plus the well-known reliability of Frost & Wood implements, makes them always the "best sellers" wherever shown.

Frost & Wood Mowers

Here is an implement that will make a life-long friend for you out of every buyer. Its outstanding superiorities are Light Draft, due to splendid roller bearings and highest grade materials—the efficient Cutter Bar, always in correct alignment with long-wearing, but easily replaced parts—and the "continuous cutting" feature which means that when raised to clear an obstruction, the knives continue cutting, saving time and crop when dropped to their work again.



Study the cut at the left---It illustrates the famous Frost & Wood "Internal Drive" gear

What does "Internal Drive" mean? It means that the teeth on the power gear are cut on the inside of its circumference, not on the outside. So, the little toothed pinion which picks up the power also runs on the inside of the power gear, travels in the same direction with it, thus making stronger, sturdier construction, always in good order, free from rattling and looseness. Note also the splendid roller bearings used, meaning light draft, good work and long life.

The Cockshutt Agency is a Valuable Business Asset

Every Cockshutt-Frost & Wood dealer realizes quickly the vast difference there is in turning over his money easily and often in these well-known, well-advertised goods, and in struggling with the sale of lesser known implements. Big advertising, big dealer service and a complete line of quality implements. That's our proposition to our Dealers. Are you one of them?

Frost & Wood Rakes

Many a farmer never appreciated what a GOOD Rake meant to him until he used a Frost & Wood. Then he saw that all-steel construction, highest grade materials, super-tempered teeth, and up-to-date conveniences—AND Frost & Wood light draft—really meant money in his pocket at haying time, and for many years at that.

Send for our latest Catalogues and Folders on Frost & Wood Mowers, Rakes, Side Delivery Rakes and Hay Loaders. They'll certainly interest you.

The Frost & Wood Co.
Limited
Montreal, SMITH'S FALLS, St. John

Sold in Western Ontario and in Western Canada by

Cockshutt Plow Co.
Limited
BRANTFORD, ONTARIO

Happy Farmer Tractor Bris

Simplicity

It is the simplest of all tractors. It is as easy to run as an automobile. It is the least liable to get out of order. It does its work quickly and effectively.

Accessibility

It has only two-thirds the number of working parts, and every part is easily reached. It is the most get-at-able tractor ever designed. As you sit on the driver's seat every working part of the engine is within arm's length.

Self-Guiding

It is self-guiding in the furrow and will turn short in its tracks in a space of less than nine feet, leaving the operator free to attend to the plows.

Burns Kerosene

The engine is specially designed to burn cheap coal-oil in the way that turns every ounce of fuel into actual power

NO other dealer can offer as much in formance and economy, as the Hap built like it. Its design is the pro skill of famous engineers. It does the weight and consequently at less cost. C the advantages of this up-to-the-minute

Happy TRA

If your territory has not already been snapped up by enterprising deal

The Renfrew Machinery Company, L

Agencies almost everywhere in Canada

Other lines: Renfrew Cream Separator---Renfrew

les with Selling Advantages

way of practical design, effective per-
Farmer man. There is no other tractor
of years of experience and practical
that other tractors do with far less
nly it is worth any man's while to sift
or and act promptly.

armer
TOR

Does the Work

The Happy Farmer pulls three 14-inch plow bottoms at an average depth of 8 inches. With only 3700 lbs. weight it develops 2000-lbs. draw bar pull and 24 horse-power for belt work. It is heavy enough to do the hardest plowing—the big test—yet light enough not to pack the ground.

One Man Tractor

Think of the time and expense saved by being able to do every power-farming job single-handed!

Economy

Owing to light weight, simplicity of construction, perfect balance and perfect consumption of kerosene, the Happy Farmer does the most work for its size. It has no rival for economical performance.

Popularity

The above are a few of the points that are spreading like wildfire the popularity of the Happy Farmer.

lose no time. Write for attractive selling proposition without delay.

nited, Head Office and Works, **Renfrew, Ontario**

Eastern Branch, Sussex, N. B.

erosene Engine---Farmers' 2000-lb. Truck Scale

Stinson Puts "Hat" on Tractor Map

Written by our own correspondent who was there:

C. M. McLENNAN

This picture was taken by a CANADIAN MOTOR TRACTOR AND IMPLEMENT TRADE JOURNAL photographer at Medicine Hat, April 25, and shows the Stinson Tractor and Oliver Plow in the demonstration there. Inset is the picture of W. R. Martin, one of the firm which is putting "the Hat" on the tractor map.

MEDICINE HAT is indelibly on the map as Western Canada's leading tractor and industrial centre. Friday, April 25, saw the largest and most enthusiastic demonstration ever held here, more than 2,000 people being in attendance at the plowing and tractor show. Primarily the event was staged to inaugurate the birth of a local tractor manufacturing industry, by Martin and Phillips, who have contracted to build the Stinson in Medicine Hat. The initiative of this firm is responsible for the success of the venture, but their motives are so unselfish that they have secured the backing of the Board of Trade and the civic authorities with a view to making it an annual event open to every line of industrial activity. Next year it is hoped that every make of tractor sold in the West will take part, and every effort will be put forth to develop the show into a really potent factor in the industrial progress of the city and country. In addition to tractors, the scope of the exhibition will be enlarged to include every product manufactured in Medicine Hat, and also other lines of machinery, accessories and equipment used on Western Canadian farms and in Western Canadian homes. The tremendous success of the initial attempt, and the remarkable manner in which the people of the city and district supported the endeavor spells unqualified success for next year's show. Our prediction is that it will grow into one of the biggest tractor and industrial shows on the continent in short order, because it has all the qualifications necessary plus the organizing ability and untiring energy of C. L. White of the firm of Martin and Phillips, who must be credited with the honor of making the present event what it was. In another year Mr. White will have the stage set for an epoch-making demonstration, because he has the confidence of everyone, is not afraid of competition, is unselfish to a marked degree and has the good of his community and of the tractor industry as a whole at heart.

THE crowd which attended this show was really a surprise. The Board of Trade looked after conveyance of the multitude to Burnside, the scene of action, and dozens of cars carried load after load of farmers, dealers and citizens to the grounds. There wasn't a hitch in the arrangements, everything moving like clock work, and there were no irritating delays in the field.

Three Stinson machines were lined up, two of them pulling Oliver and Moline plows and one hooked up to a double disc, a Van Brunt press drill and a set of harrows,—and they all performed well. Mr. Phillips handled one machine, Mr. Stinson another, and Mr. Laid of the Saskatchewan Grain Growers, a third. All three operators would be a credit on any machine. C. H. Dawley, of the Oliver Chilled Plow Works, at South Bend, was on hand to look after the actual work of plowing. Four bottoms were drawn by each tractor, and they handled the job with ease at all stages. The soil was in exceedingly nice condition, and the work was all done on sod. Lubrication and fuel problems were handled very efficiently by R. C. Glaze, of the Imperial Oil Company. Polarine A oil, Polarine transmission oil, and Royalite fuel contributed greatly to the successful performance of the tractors.

The soil was moist and light, and the job which Martin and Phillips contracted to plow calls for a depth of only 3½ inches. About 100 acres of the tract will be put under water, and operated as a demonstration irrigation farm for the edification and education of all and sundry, and the promoters ordered it broken up to the depth mentioned. Nevertheless the Oliver breakers were socked in to a depth of 4 to 5 inches just to test the power plant, and this failed to dampen its spirit one iota. Furthermore, the Stinson, being an 18-36, is doing what is claimed for it when it drags 3 plows through sod. It hauled four without difficulty. There is a future for such tractors as Stinson in this big growing market. It will appeal to dealers and farmers alike as a simple, efficient machine. Its enclosed gears, steering apparatus, motor and price are special features.

Just a word about the idea of an annual event of this kind:

AT a luncheon given by Messrs. Martin and Phillips on Thursday, Mr. White in a very lucid address outlined his conception of the form the demonstrations should take. He made it plain that it should not be limited to tractors, but that every one of the many industries now flourishing in Medicine Hat should join in staging a genuine industrial congress or exhibition, and he appealed to the leaders of all the various trade and commercial bodies for support. The object would be to make this city stand out in Canada and elsewhere as the industrial centre of the West. It is planned to have all makes of tractors doing business in the West enter machines and they are not to be looked upon as competitions.

Another important and very popular suggestion was made by Mr. White, and the chances are that it will be immediately taken up and acted upon. He pointed out the tremendous value of knowing one's city, and with a view to making the present generation of children potential travellers and salesmen for their city in the future. He suggested to the representative of the school board that steps be taken at once to educate all children in the public schools, from the seventh grade up, in the details of manufacture of every article now made in the city, such as clay products, pottery and glassware, rolling stock, pumps and windmills, flour, linseed oil products, tractors, etc. To this end he thought the various manufacturers could well afford to offer prizes to school children for

Continued on page 30

This picture illustrates a 9-18 Case tractor at work in one of the aerodromes in France. Tractors have been found to be very successful for pulling planes out of their hangers and for towing in disabled machines. The plane in the picture is one of the large Farman machines. Last month our readers may remember we depicted a Handley-Page also being pulled by a tractor.

IRON AGE

Riding Cultivators

Cultivation Is Fertilization

More and *Better* Cultivators Would Be Sold

—if dealers would teach their customers that

"Cultivation is Fertilization"

The illustrations on this page are from photographs taken on the Iron Age Farms. They prove what **right** cultivation will do towards making profitable crops. You can show this advertisement to your customers and explain that the conditions in both plots were the same—except Iron Age Cultivation.

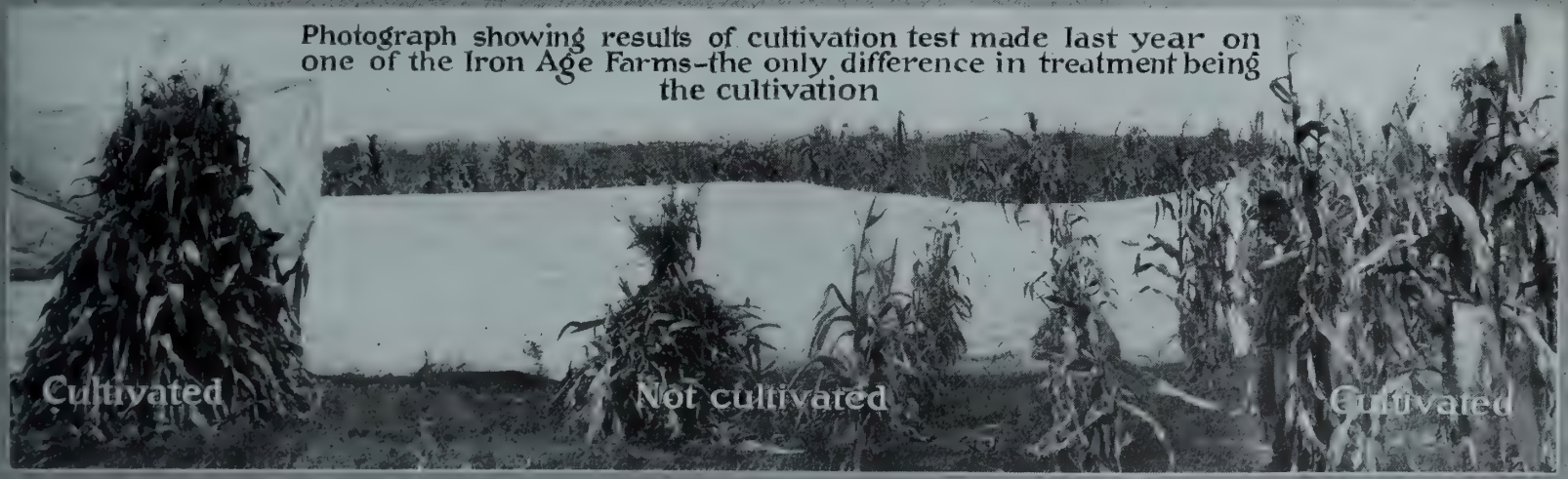
"Cultivation is Fertilization." Talk this to your trade. You will sell more and better cultivators—Iron Age Cultivators. It takes a refined implement like the Iron Age Riding Cultivator with its features of convenience, adjustable gangs, parallel motion, etc.; its scientifically correct working of the soil, to produce such results.

Investigate that remarkable new invention, the new Fertilizer Attachment for use on Iron Age Riding Cultivators.

Write today for catalogs, prices and terms

The Bateman-Wilkinson Co., Limited
399 Symington Ave. - Toronto, Canada

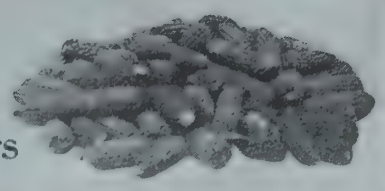
Photograph showing results of cultivation test made last year on one of the Iron Age Farms–the only difference in treatment being the cultivation



71 Pounds

Iron Age cultivation makes the difference
between
the little shock with nubbins
and
the big shock with well-filled ears

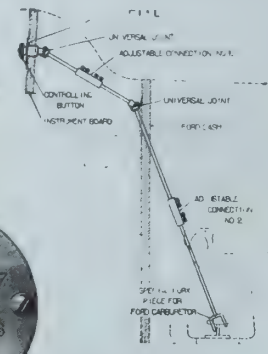
20 Pounds



New Equipment

CARBURETOR CONTROL

The Standard Thermometer Co., Boston, Mass., have placed on the market a new carburetor control. The feature of this accessory is in the fact that the adjuster is raised from the Ford dash to the instrument board, which the many users of the Ford cars are installing. Once an instrument board is applied the



Method of Installing the Standard Carburetor Control

Standard Carburetor Control

driver finds it difficult to note the position of his adjuster. The Standard Control is not only within the range of vision, but is very easily reached.

The Standard Control is so simply designed it can be installed in ten minutes or less, as you simply remove the Ford Adjuster, bore a hole in cowl and install the Standard, as shown in accompanying cut.

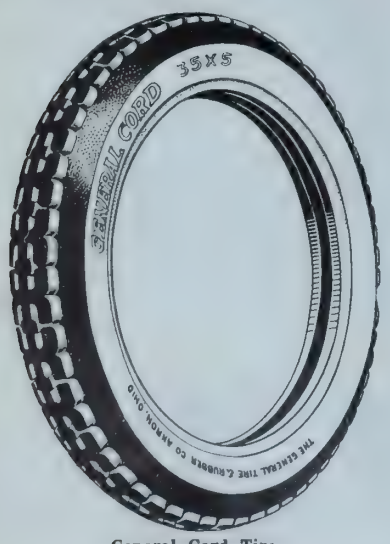
The adjustable connections allow for reasonable variation and two universal joints permit freedom of motion at necessary angles, making it unnecessary to employ a skilled mechanic to make the installation.

The indicator is so constructed *it can be fitted to any board* and the pointer set to suit the owners. The white numerals on black enamel plate are easily read from driver's position.

The Canadian agents are the Virtue and Liberty Motor Sales, Ltd., 531 Yonge St., Toronto.

GENERAL CORD TIRE

The General Cord Tire is built up by hand on the usual steel core and is then transferred from the steel core to a specially constructed air bag. The uncured carcass containing the air bag is then inflated so as to stretch the cords



General Cord Tire

to a degree that inflation on the wheel would stretch them when the tire was in service, every cord being expanded equally to the fraction of a inch.

Thus when the tire is inflated on the wheel, it is in the same condition that it was when cured. The rubber and fabric are *not* stretched, it gives naturally to road obstruction; the rubber doesn't cut, split, rim-cut or separate from the fabric as in the case where inflation on the wheel puts the whole tire structure under tension.

A 36 x 4½ General Cord is as large as the largest 37 x 5 fabric tire and in addition has eight plies of cords as against the seven plies of fabric in the 37 x 5 fabric tire.

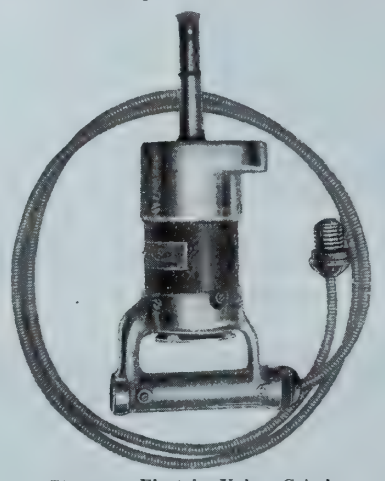
Yet the 36 x 4½ General Cord—as large a tire and with one more ply—costs 10 per cent. less than the 37 x 5 fabric tire, and gives "cord" comfort, class and economy in addition.

The General Cord Tire for passenger cars is made with both ribbed and non-skid treads, in sizes from 32 x 3½ up to 37 x 5. Retail prices range from $42.30 to $87.40. General Tire & Rubber Co., Akron, Ohio, are the manufacturers.

VALVE GRINDER

The Stenman Electric Valve Grinder bears the same relation to hand valve grinding that the vacuum cleaner does to the old corn broom method of carpet cleaning. Ten days' usage and the makers say that it will pay for itself.

The Stenman will grind a set of eight valves in twenty minutes, whereas it



Stenman Electric Valve Grinder

takes two hours or more to grind them by hand. The Stenman is claimed to do a better and more even job. Also a novice can operate it. It plugs in on any lamp socket—A or D current. Regular stock 110, 130 volts, and it is made for higher voltage where required. The manufacturers are the Stenman Electric Valve Grinder Co., Inc., Worcester, Mass.

GREYHOUND PRODUCTS

The Greyhound "Thrift and Upkeep" products have been featured at several auto and accessory shows this year. They are placed on the market by the Camden Chemical Co., Camden, N.J.

The Greyhound Combination Grease is

Greyhound Combination Grease

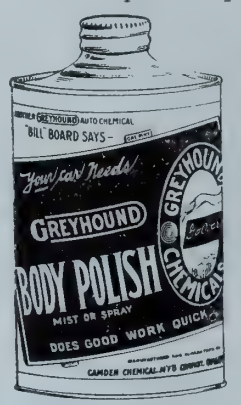
for cups and transmission; distinctive feature—a two in one grease—serves a double purpose for a single price.

The Greyhound Body Polish; distinctive feature—chemical composition that

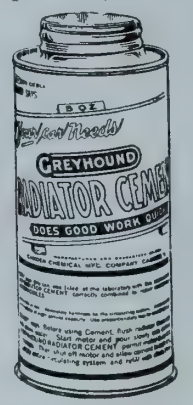
Greyhound Automobile Soap

tends to keep from excessive hardening the high finish on motor car bodies, thus increasing the life of the finish, while reviving original lustre. The appearance of a car deteriorates quickly and this polish helps to halt this visible depreciation.

The Greyhound Radiator Cement is a harmless powder preparation, which



Greyhound Body Polish



Greyhound Radiator Cement

will not attack any of the inner works, but is carried in the water following the natural flow until deposited at the leak, which it unerringly finds, fixes and seals: distinctive feature—a harmless vegetable powder, not an attacking chemical.

The Greyhound Auto Soap; the only distinctive feature is that it is pure soap and nothing else.

AUTOMOBILE LENSE

The "Parab-O-Light" automobile lense, with several new features, is being placed on the market by the Zorger Lens Co., 323 N. Neil St., Champaign, Illinois. Dealers interested should write to the above company for a booklet

The "Parab-O-Light" Auto Lense

which will show what size lense will suit specific cars. When ordering lenses the diameter of the old glass lense and the model and make of car should be given.

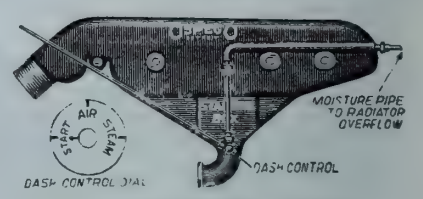
This lense is distinctively new in the fact that it produces, with the bulb in centre focus, a double half cone of light. Thus it produces practically 100 per cent. more driving light than a headlamp with the plain glass lamp front.

Furthermore, it is new in the fact that it permits of two focuses or adjustments, the centre focus as described above and, in addition to this, a "spotlight" focus which is obtained by pulling the bulb back or pushing it forward ⅛ of an inch from centre focus. With this "spotlight" focus a great distance can be obtained, from 800 to 1,000 feet.

MANIFOLD FOR FORDS

The OspecO Manifold is designed for the Ford car, and it is claimed that it will save gasoline and oil, as well as increase the mileage. With it, one is enabled to drive on air and super-heated steam, in connection with the gasoline.

The OspecO Manifold is guaranteed to give from forty to sixty per cent. more mileage on your gasoline; your engine will always be free from carbon and fouled spark plugs. You can start



The OspecO Manifold for Fords

your car in the coldest weather with as little trouble as in the summer and have the same smooth-running engine on hot dry days as you have enjoyed on damp days or evenings, the manufacturers announce. Unlike many other Manifolds, this cannot be over-heated as it is controlled from the dash by the driver. This Manifold is fully guaranteed by the OspecO Manufacturing Co., Detroit.

ELECTRICAL PRIMER

The Master Electrical Primer is claimed to be an electrical vaporizer that starts the motor instantly in zero weather. It is said to save time and temper; gasoline and battery; worry and towing.

The Master Primer is practically an auxiliary carburetor. It functions in exactly the same way as a carburetor except that it heats the gasoline to the boiling point, vaporizes it by heat and

The Master Electrical Primer

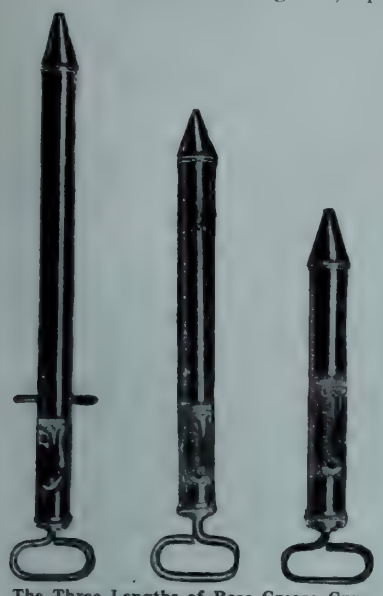
mixes it with air. It turns hot gasoline into the manifold instead of cold fuel.

This hot gas is obtained through an electrically heated coil which rests in a porcelain lined chamber. This chamber is always filled with gasoline which is drawn direct from the carburetor at a point controlled by the float level. A pull on the button on the dash makes electrical contact with battery and at the same time opens outlet valve of the Master Electrical Primer. The coil becomes white hot boiling the gasoline. Suction from the engine draws the hot vapor through the needle valve and mixes it with air to form a hot mixture that will of course ignite much more quickly than cold fuel.

The Master Primer Co. is located in Detroit, and the Canadian agents are the Canadian Sales Co., 183 Church St., Toronto.

ROSE GREASE GUNS

The Rose Grease Gun with the new taper nozzle supplies a big need. This is the regular line of Rose Guns supplied with a taper nozzle as shown herewith. No. 1, the Auto Gun, 12½ in. long by 1¼ in. diameter for individual use; No. 2, Truck and Tractor Gun, 19½ in. long by 1½ in. diameter; No. 3, Shop and Garage Grease Gun, 24 in. long by 1½ in. diameter, having handles to prevent slipping in the hands. Each of the guns is made of solid steel throughout, equipped with the regular patent valve which prevents grease working out at the top.



The Three Lengths of Rose Grease Guns

This taper nozzle has its advantages, inch to 1½ inches sufficiently to prevent grease backing out around the nozzle as the gun is discharged. With this Taper Nozzle it is possible to pack a universal joint absolutely full of grease without waste.

The prices are: Rose Auto Gun Taper Nozzle, $1.80; Rose Truck and Tractor Grease Gun Taper Nozzle, $2.50; Rose Shop Gun with handles and Taper Nozzle, $3.50.

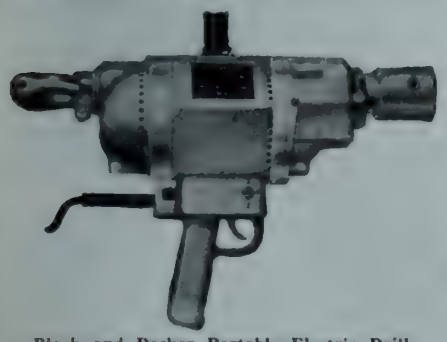
They are manufactured by J. H. Haney & Company Hastings, Nebraska.

ELECTRIC DRILL

The Black & Decker ½ in. Portable Electric Drill, as illustrated, is equipped with a ½ H.P. motor. Its full load current consumption is about 700 watts, and the no load speed 600 R.P.M.

The housing is of aluminum alloy, completely enclosing the motor and gears, and the total weight of the machine is 21½ lbs.

The most outstanding feature of this drill is its method of control, the *"Pistol Grip and Trigger Switch,"* which makes it possible to handle it like an automatic pistol; one pull on the trigger turns the current on and the next pull turns it off. This arrangement enables the operator to control the drill practically automatically, without having to change the position of his hands in order to manipulate the switch. An indicator is provided showing when the switch is on and when it is off.



Black and Decker Portable Electric Drill

The electric motor is series compensated wound—interpolar type—and uses direct current or 25, 40 or 60 cycle alternating current, and will operate from any two wires of a three-phase circuit. Motor is air cooled by means of a centrifugal fan mounted on the armature shaft, which draws air in at one end of the motor and expels it at the other.

The gears are cut from high carbon steel, mounted on ground shafts, and operate in grease in a separate grease-tight compartment. Drill spindle runs in a long bronze bushing against a ball thrust bearing.

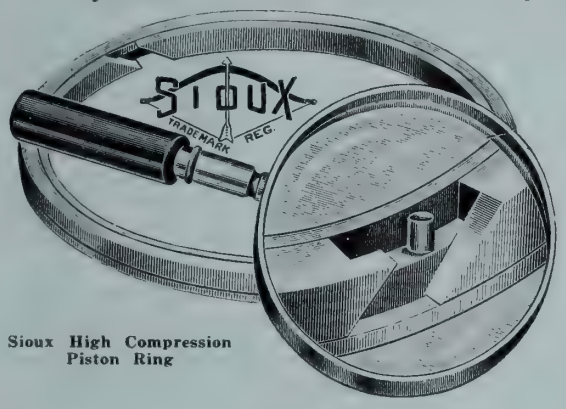
The commutator end cover is entirely separate from the armature shaft bearing, and is, therefore, easily removable for inspection and adjustment of brushes. This also eliminates the possibility of armature shaft binding in bearing, in case the end cover is accidentally distorted by dropping the drill or by exerting excess pressure on the feed screw.

This machine, for 110 volt current, sells for $92.00; for 220 or 32 volt current the price is $95.00. It is manufactured by Black & Decker Mfg. Co., Baltimore, Md.

SIOUX PISTON RING

Plain piston rings, either diagonal or lap joint, with their unavoidable leakage causing carbon and faulty compression, are now obsolete.

It does not, however, follow that multiplicity of parts insures piston ring perfection and buyers are advised to carefully examine and consider from a strictly mechanical standpoint, the construction of Sioux high compression piston rings.



Sioux High Compression Piston Ring

Sioux high compression rings are sufficiently simple in design to allow perfect workmanship without prohibitive cost, and as there is no point at which the gas can pass directly through the ring or into the ring seat in the piston, leakage at the point is impossible.

The material is the finest grain gray cast iron so heat treated that absolute uniformity of pressure on the cylinder wall is assured.

The finish is such that they wear into the cylinders in the shortest possible time and are in no way affected by any temperature within the cylinders.

Albertson and Co., Sioux City, Iowa are the manufacturers.

SIOUX BUSHING REMOVER

The "Sioux" Bushing Remover is claimed to solve the old time-wasting and patience-trying job of removing bushing.

The "Sioux" Bushing Remover was perfected after long Subject to every possible test, and careful experimenting. it has proven its merit. Its action is simple. You screw it into the bushing in which it cuts its own threads. This gives you the grip on the bushing; then you drive it out from the back.

The No. 20 "Sioux" Bushing Remover is to remove blind bushings—those which cannot be driven out from the back. This you screw into the bushing; then you screw a centre piece through the No. 20 "Sioux" Bushing Remover and keep screwing the centre piece, with jackscrew effect, until the bushing is removed.

Sioux Bushing Remover

This is an Albertson and Co. product, Sioux City, Iowa.

LANE H. C. JACK

A jack that has sprung into popularity because of its unique features is herewith illustrated, called "The Lane H. C. Jack" or "Handle Controlled." It is controlled by one hand from the outer end of a three-foot handle which, when not in use, folds over and occupies but little room in the tool box.

Not only may the jack be placed under the car by one hand from the outer end of this three-foot jack handle and operated, but the reverse is accomplished by a slight backward twitch of handle that sets the jack in reverse, eleminating the necessity for pushing a reverse lever on the side of the jack or even removing the jack handle, as is customary with other jacks.

This feature is exclusive, we understand, with the Lane H. C. Jack. Its special adaptation for use with fine cars having low rear fenders has already brought it wide popularity. The Lane H. C. Jack keeps one entirely away from contact with grease or soil; it does the work rapidly and with the utmost case.

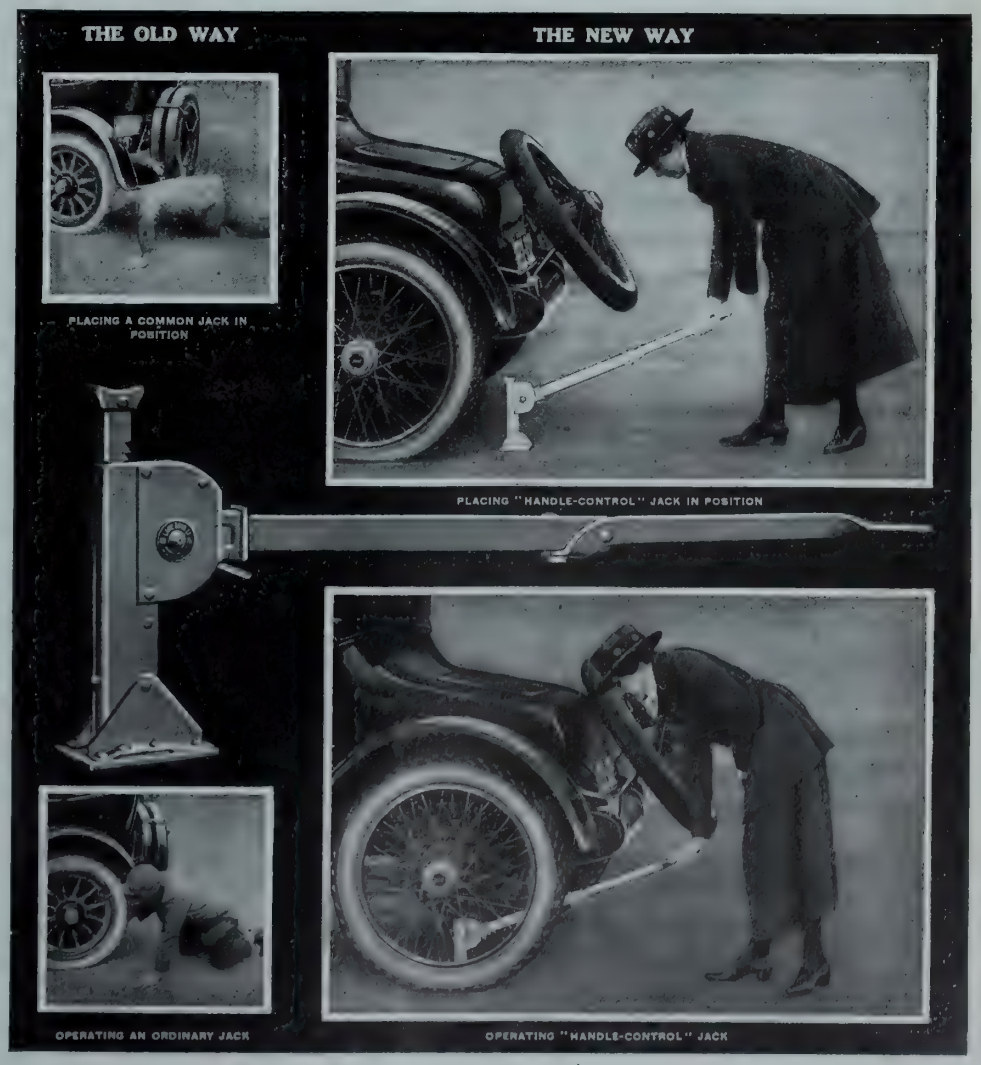
It is manufactured by Lane Bros. Co., Poughkeepsie, N.Y.

SE-MENT-OL LIQUID

This radiator cement is said to be able to "find the leak and fix it." The manufacturers assert that it permanently repairs leaks in five to ten minutes in tractor, truck, and automobile cooling systems. No laying up of car or loss of any time to allow repair to set or harden. The motorist simply pours Se-Ment-Ol Liquid in the radiator and drives on. The circulating water in the cooling system carries Se-Ment-Ol to the leak and as it reaches the air it congeals instantly, forming an elastic repair which cannot be torn down by the action of the water or the vibration of the car. The heat from the motor hardens the repair, making it permanent. Draining of the radiator is not necessary, in fact the Se-Ment-Ol Liquid in the cooling system will automatically repair any new leaks that may develop. One 75 cent can will repair a cooling system holding six gallons of water. The retail price of a 10 oz. can is 75c.

Se-Ment-Ol Liquid Radiator Cement

The Se-Ment-Ol is placed on the market by the Northwestern Chemical Co., Marietta, Ohio.


THE OLD WAY
THE NEW WAY
PLACING A COMMON JACK IN POSITION
PLACING "HANDLE-CONTROL" JACK IN POSITION
OPERATING AN ORDINARY JACK
OPERATING "HANDLE-CONTROL" JACK

The old way and the new way, showing how the Lane H. C. Jack simplifies the work

NEWS — OF THE TRADE FOR THE TRADE

BRITISH COLUMBIA

VANCOUVER, B.C.—The Vancouver Motor Supply Company has been sold to H. J. Arthur.

VANCOUVER, B. C.—In 1907 there were 175 automobiles in British Columbia; in 1918 there were 15,828.

ASHCROFT, B.C.—George Ward and Frank Riley have been appointed local agents for Massey-Harris machinery.

VICTORIA, B.C.—Fred C. Honey, formerly of Victoria, Ontario, recently returned from overseas, has been placed in charge of the tractor department of Plimley's automobile establishment.

NEW WESTMINSTER, B.C.—W. R. Sim and Albert James have opened an up-to-date garage here, with the Chevrolet and Dodge agencies. They will also handle Republic trucks and tractors, and Dunlop tires and accessories.

ALBERTA

CARMANGAY, Alta.—N. J. Roberts has sold his automobile business.

BARONS, Alta.—C. W. Hanston has opened a tractor and automobile business here.

PONOKA, Alta.—Messrs. Milton and McGuire, of Calgary, have taken over the Ford agency in this district.

LETHBRIDGE, Alta.—Two new automobile concerns recently established here are those of B. Sweitzer and the Central Garage.

CALGARY, Alta.—G. D. Williams has been appointed credit manager of the Dunlop Tire and Rubber Goods Company, Ltd., of Calgary.

MACLEOD, Alta.—The Avery Engine and Implement Company has opened a branch office here, with Joseph A. White as local manager.

BOW ISLAND, Alta.—A. E. Tunstall, of the City Service Garage, Lethbridge ave., has enlarged and improved his garage and service station.

REDCLIFF, Alta.—The Dauntless Manufacturing Company, of Redcliff, has built a large plant here, and is commencing the manufacture of farm implements.

MILK RIVER, Alta.—The Smith garage and implements buildings have been burned to the ground, the fire starting from an engine exploding. Several new cars were burned.

RED DEER, Alta.—E. Michener is building a garage and implement warehouse, at a cost of about $10,000, and announces that he will carry a full line of power farming machinery.

MEDICINE HAT, Alta.—J. E. Davis, of the Alberta Foundry Company, announces that the company will commence building a farm tractor which they anticipate selling to farmers of Western Canada at a price of about $1,00. They announce that they expect to commence production about June.

SASKATCHEWAN

WADENA, Sask.—B. J. Youngquist has sold out his implement warehouse to W. Walkof.

MOOSE JAW, Sask—The Canadian Garage has added the new Essex car to their list of agencies.

SASKATOON, Sask.—The Knechtel Motor Company is a new corporation, with head offices here.

MOOSE JAW, Sask.—Manley and Slater Company have taken the local agency for the Dodge Brothers car.

YOUNG, Sask.—Ericson and Leander have dissolved partnership and the latter assumes charge of the garage business.

BOISSEVAIN, Sask.—Burgess & Lawler have signed up for the Gray-Dort agency, and are enlarging their garage.

DE LISLE, Sask.—The business of N. Bentley, harness dealer, was burned to the ground in the fire which recently swept the town.

REGINA, SASK.—At a meeting held here recently of the Saskatchewan Farm Land Association resolutions were passed urging that the tariff on agricultural implements be abolished.

MELFORT, Sask.—James Fraser, who has been manager of the Dutton Wall Company at Melfort, has been appointed manager of the Melfort branch of the Imperial Oil Company.

TISDALE, Sask.—Joseph Roy, who for many years conducted a garage in Saskatoon, has moved to this town and is now occupying a large and up-to-date garage and machine shop.

GOVAN, Sask.—At a recent meeting of the executive of the Govan Motor and Machine Company, Harry Neely, who has sold his implement business to Gar Purdy, was appointed manager.

SASKATOON, Sask.—A. Dudley Sampson (for six years service manager for McLaughlin Carriage Company, Saskatoon), has opened a garage and service station of his own at 207 to 209 Wall street.

KAMSACK, Sask.—Dixon Brothers, implement dealers, have sold out to J. Dutczyszyn. J. Hooper has opened a harness store, and Sazinkoff and Rattary have commenced the operation of an automobile business.

REGINA, Sask.—The Western Tractors Sales Company announce a new general manager in D. E. Nieda, formerly of North Dakota. This company are distributors in Saskatchwan and Alberta for the Plowman tractor.

REGINA, Sask.—Saskatchewan has one automobile for every fourteen persons. Alberta has one for every eighteen; Manitoba one for every twenty-four; Ontario one for every twenty-two; and Quebec one for every seventy-seven.

REGINA, Sask.—At the annual convention at the Saskatchewan Retail Merchants' Association, which is being held here May 13, 14 and 15, the implement trade section of the association will have some very important matters to discuss.

SWIFT CURRENT, Sask. — Wm. Bell, who represents the plow department of the International Harvester Company of Canada, over a territory extending from Fort William to Vancouver, has moved his headquarters from this city to Regina.

SOUTHEY, Sask.—A disastrous fire, doing approximately $40,000 worth of damage and destroying more than a score of automobiles, took place here early in April. The machine shop and garage owned by Planeto and Shoemaker, with contents, was completely destroyed.

MELFORT, Sask.—Work is well under way for the new garage being built for the Canada Motor Company, at the corner of Saskatchewan and Manitoba streets. The building, 125 feet by 50 feet, will have a 30 foot plate glass front, and will likely be ready for occupation late in May.

MOOSE JAW, Sask.—"Sol" Snider, a well-known local business man, did a "nose dive" in a Chevrolet car in the Moose Motors garage, High street, W., and dropped twenty-five feet into the basement, but escaped with a scratched cheek and barked shins. The car had been in for repair and was placed on the floor of the elevator on the second floor of the garage. It was accidentally tipped off, and when it was examined after landing was found to be almost a total wreck.

MANITOBA

NEEPAWA, Man.—B. D. Ego has opened a new implement business here.

WINNIPEG, Man.—R. R. Kinread has bought out the interests of the Canadian Never-Break Tread Company.

BRANDON, Man.,—The Canadian Lightning Arrester and Electrical Company, Brandon, has changed the firm name to Townsley Manufacturing Company.

WINNIPEG, MAN.—A despatch to the *Telegram* states that it is the belief in Ottawa that the duty on agricultural implements will be cut in half in the near future.

WINNIPEG, Man.—The Stewart Sheaf Loader Company announce a new combination sheaf loader, of the "New Era" line, which they have just placed on the market.

WINNIPEG, Man.—W. M. Ferguson announces that he has produced a machine for grading, cleaning, and separating grain which, it is claimed, has some novel features in its design.

WINNIPEG, MAN.—W. J. Falconer, president of Associated Implements Ltd., made an inspection and business survey throughout South-western Manitoba late in April calling on the trade.

WINNIPEG, Man.—The Western Canada Motor Company, Limited, have taken over the distribution of National trucks for Manitoba. These trucks are manufactured by the National Steel Car Company, Limited, of Hamilton.

BRANDON, Man.—The Currie Manufacturing Company, of Lauder, Man., manufacturers of the Webber Fanning Mill, and other lines, announce that they will shortly move from that town to Brandon, as they have procured a site here.

WINNIPEG, Man.—H. F. Anderson, manager of the Tudhope-Anderson Company, of Winnipeg, who has been seriously ill in England for several weeks, is now safely on the way to recovery, according to recent cable despatches, and expects shortly to rturn to Canada.

WINNIPEG, MAN.—Hugh McMillan, who travels throughout Western Canada for the Associated Implements Ltd., Winnipeg, remained in Winnipeg during the month of April helping the firm get out their orders, which have been heavy this spring.

WINNIPEG, MAN.—Canadian production of Maxwell and Chalmers cars is being speeded up also. Canadian production of Maxwells has reached 300 cars and 50 trucks a month. The Canadian Chalmers is turning out 60 cars a month, and is getting ready to run up its production as soon as the material situation is relieved.

WINNIPEG, Man.—John B. Ritchie has been appointed Western Canadian manager of the John Watson Manufacturing Company, whose Western headquarters are in Winnipeg, succeeding E. S. Strachan, who recently went to the Swedish Separator Company. Mr. Ritchie has been with the Watson firm since 1908, and before that was with the International Harvester Company.

ONTARIO

SUNDERLAND, Ont.—W. J. Ward has opened a new garage.

GORE BAY, ONT.—O. E. Langford has opened a plant for vulcanizing automobile tires.

CORNWALL, ONT.—A McLaughlin Motor Show was held during the middle of April in W. H. Fetterly's show rooms.

BRANTFORD, ONT.—Local implement factories are busily engaged in filling export orders for Roumanian and French business.

WINGHAM, Ont.—The Aero Cushion Tire Company, recently incorporated here, has finally decided to locate its factory here also.

WOODSTOCK, Ont. — In Oxford County 1812 auto licenses have been issued to car owners, and 80 per cent of these are to farmers.

PICTON, ONT.—C. C. York has purchased Milton Vandusen's interest in the Prince Edward Garage; the new firm is known as Hotston & York.

AILSA CRAIG, Ont.—W. D. Yelf, a local hardware merchant, is extending his premises, and building an up-to-date auto and repair shop.

TOTTENHAM, Ont.—Robert Gallagher has rented a store in the Union block, and will fit it up for the handling of the International Harvester Company's implements.

GUELPH, Ont.—When a farm team trampled upon a pipe line of the Imperial Oil Company's yard, more than 1,200 gallons of gasoline, valued at about $500, were spilled.

TORONTO, ONT.—The speed limits for automobiles in Ontario will be raised at the present session of the Legislature to 20 miles an hour in urban centres, and 25 miles in the country.

PERTH, Ont.—Nelson Kimberly has opened a garage which he calls Kimberly's "Independent," and announces that he is prepared to repair all kinds of cars. He handles no car agency.

TEESWATER, Ont.—A by-law voted on to lend Olheisher & Son, owners of the Bruce Agricultural Works, $1,500 for ten years without interest was defeated by five votes in the council.

PETERBORO, Ont.—The Duffus Garage has taken the agency for the Denby heavy duty truck, which includes a full line from one to six tons. This truck is manufactured in Canada.

SARNIA, Ont.—The John Goodison Thresher Company has contracted with the Kaufmann-Parrett Company of Kansas City, to sell Goodison separators in Kansas and other Western States.

BRAMPTON, Ont. — The Hercules Rubber Company has begun the manufacture of inner tubes, and will soon have a large output and extend their product so that they will be also making outer casings.

RENFREW, Ont.—F. B. Vickers has retired from the management of the Renfrew Machinery Company and his place has been taken by H. A. Jordan, who has been appointed managing director of the organization.

WELLAND, Ont. — The Dim-Lite Specialties Company, Limited, with a capitalization of $60,000, has been formed here, to market the invention of a local man, W. H. Honsberger, who has recently invented a dimmer device for automobiles.

BRANTFORD, Ont.—Strong resolutions against any change in the tariff until a thorough investigation has been made by a commission, and against the elimination of the tariff on agricultural implements, have been made at a meeting held here April 21.

OSHAWA, ONT.—R. F. McLaughlin, managing director for Canada and vice-president of the General Motors Corporation, characterizes as absurd the report that the McLaughlin-Buick firm is contemplating to remove its plant from Oshawa to Walkerville, Ont.

QUEBEC AND MARITIME

HALIFAX, N.S.—Hugh G. Fraser has sold his taxi business and has opened an auto accessory store.

ROCK ISLAND, P. Q.—Mr. Ames, until recently proprietor of the Rock Island garage, has sold out to Mr. Emond.

MONTREAL, P.Q.—Arrangements have been completed for the manufacture in this city of the complete Norwesto line of auto specialties, the products of the North Western Chemical Company.

HALIFAX, N.S.—"Art" Robinson, of Robinson's Garage, has returned from New York where he spent two months in overalls in the factories of the Reo cars and White trucks, for which he has the local agency.

Influence of the Liberty Motor on Automobile Motors

IS it possible to use the design of the Liberty motor with its immense horse-power for automobile motors? Such is the subject of discussion in an article in *Collier's*, by Lucian Cary, which treats also of French, British and American automobile design.

The writer says in part:

Just after the armistice was signed I overheard in a subway train a prophecy about this year's automobiles.

Said one strap hanger: "I suppose now they'll be using these Liberty engines for automobiles."

Said the other strap hanger: "Sure, every car'll have to have a Liberty motor."

Of course when you think twice about it you perceive the absurdity of fitting an ordinary car with a motor that develops some four hundred and fifty horse-power. A Liberty motor under full load uses from thirty-five to forty gallons of gasoline an hour. A Liberty motor is ten times as powerful as the average automobile motor. No touring car could possibly use so much power. If that much power were turned loose in a touring car, something would have to break. All the world's speed records might be broken first, but after that—Would there be premonitory cracks about the time you passed two miles a minute or would everything go up in one tremendous bang as you approached three miles a minute? If the fenders held, they would certainly lift the car aloft on the air.

But there is something in the idea that the design of the Liberty motor might be borrowed for automobile motors. It will be borrowed. Or rather, it will be adapted. It is not feasible to make a precise copy of the Liberty motor on a small scale.

Anybody who compares British, Italian, French, German and American cars will see the man behind the engineer and the nation behind the man. An automobile is really an expression of nationality as well as an expression of applied knowledge. How else can you explain the striking differences in the cars produced by different nations? Nowadays technical knowledge is universal.

In a sense American cars are less distinctive than foreign cars. The American public is insatiable. We have every kind of car (save one) and everything in a car. The moment a European designer turns up something desirable, our manufacturers borrow it, or adapt it, or improve on it. European manufacturers are somewhat slower to borrow improvements from us because their public is less insistent. Thus an English automobile paper that has just come to hand seriously questions whether or not the British manufacturer will furnish electric starters on his after-the-war models. Imagine that discussion in America, where for years all cars except those in which cost has been cut to the last minimum have had self-starters as a matter of course. But the complete-to-the-last-word character of American cars is really no more striking than their power. British and French and German designers have always built a few powerful cars. But the average foreign car as used in foreign countries is about half as powerful as the average American car.

During the war I saw in an English technical journal a critical but appreciative description of an Italian light car. Though the engine was only half the size of a Ford engine and the car was very small, it was high-grade, costing nearly $1,500 before the war (the one type of car referred to above that we do not produce in America).

The next month there was an equally critical and rather more appreciative description of an American car. The car in question is one of high-grade, but by no means either the largest or most expensive type of car manufactured in America. Its price was then less than $2,500. The English expert noted with interest and frequently with enthusiasm the differences between American and British practice. But the thing that impressed him most was the amount of car the purchaser got for his money—the amount of material and the amount of fine workmanship.

I might go on, pointing out the uncommon skill with which the leading Italian designers have made the lines of their motor cars express the idea of sturdiness and speed at the same time. Or the constantly increasing "snappiness" of American design. Or the French insistence on long-stroke motors. But I want to get back to the question of adapting airplane engine practice to automobiles.

When you consider copying the Liberty motor for automobiles you are at once struck with the fact that the cost has been run 'way up and the weight 'way down. The cost factor is multiplied by the weight factor. The light weight means short life—short, that is, for an automobile. It would be quite stupid to sacrifice length of life in gaining light weight to any such degree in designing an automobile motor for commercial manufacture.

The cylinders of the Liberty motor are separate units—steel cylinders with light steel water jackets. These built-up cylinders are more expensive than cast-iron cylinders; but they are much lighter in weight; there are also some slight advantages in steel as a lining for cylinders. It is not at all unlikely that makers of large and expensive cars will adopt the built-up cylinder, but its advantages in small cars seems doubtful.

The aluminum piston, already a common feature of American design, has probably come to stay. Aluminum pistons reduce reciprocating weight. If you stop to think how fast the pistons in a high-speed engine shoot back and forth, coming to two complete stops hundreds of times a second, you will realize how desirable it is to make pistons as light as possible, reducing vibration and the strain on the mechanism. Aluminum has other advantages; for one, its superiority in conducting heat. The cooler the piston the less oil is burned and the less carbon is deposited in the cylinder.

But, generally speaking, the design, construction, and materials of the Liberty motor can be much more freely copied by the makers of big and expensive cars than by makers of medium or low-priced cars.

Changes in automobile design are bound to come slowly, however. It will be a year or two before manufacturers can take full advantage of the knowledge gained in airplane work and in their experimental rooms during the war. The members of the National Automobile Chamber of Commerce voted against holding the National Automobile Show this year on this very account. There wasn't time to bring out anything new. The New York and Chicago dealers' shows will no doubt present a number of interesting things, but these are likely to be minor refinements rather than serious changes. The real revelation will hardly come before next winter, if then.

The fact is that automobile manufacturers are going to be busy meeting the demand for cars this spring and summer.

The whole elaborate process of suspending one of our largest industries and teaching us to do without its product was all but complete when Germany surrendered. The next day the equally elaborate process of putting this industry back into its old relation to American prosperity was begun. It was rather a tense period—that. All the elaborate connections by which the small streams of an industry unite with the great streams were broken. Organizations built up over years had been gradually disrupted; arrangements for materials, parts, accessories were discontinued; factories were tooted up for the production of something else. The more completely a manufacturer had turned his plant over to war work the greater his difficulties in returning to his old peace time production.

Shattered in the middle of November, the automobile industry was actively recovering on the first of December; now it is proceeding under a pressure it has never known before to meet the spring demand.

By April most manufacturers hope to be making as many cars as they ever made and to be farther behind with their orders. The rate of production will in all probability increase for a year or two before it catches up with the demand, so nearly dammed up last fall and now opening in full flood.

After next winter we may see even greater changes in the automobile than the mere adaptation of the Liberty motor.

The search for a cheaper fuel than gasoline continues. Kerosene will certainly be widely used unless a still cheaper fuel is made possible by a new kind of engine before the public is thoroughly sold to kerosene. Engines using heavy oils, costing less than a quarter as much as gasoline, and requiring no ignition system, have already been produced experimentally. And though these engines are too heavy for automobiles and wanting in the necessary flexibility, there is excellent reason for expecting within a very few years an engine that will do everything the present gasoline motor will do at a fraction of the cost.

RECORD YEAR FOR C.F.M.

A record year, both from the standpoint of the volume of business handled and that of profit, is disclosed in the annual report of the Canadian Fairbanks-Morse Company. Limited, for 1918, now being sent to the shareholders. After providing for depreciation, war taxes and allowing a full year's dividends on the preference shares of the company, the balance earned for the common shareholders was $710,097, as compared with $691,973 in 1917, $546,629 in 1916, and $619,048 in 1915. The earnings shown in 1918 represented 44.38 per cent. on the $1,600,000 common stock, against 43.2 per cent. in 1917 and 34.2 per cent. in 1916. Dividends of 18 per cent. were paid on the junior issue of the company in 1918, as compared with 26⅛ per cent. in 1917, and 10 per cent. in 1916.

After all dividend requirements were liquidated, there remained a balance of $422,097 to add to the amount brought forward from 1917, bringing the total surplus up to the substantial figure of $1,762,537. surplus of $1,762,537 represents the equivalent of nearly 57 per cent. on the combined issues of $1,500,000 preference shares and $1,600,000 common. A survey of the balance sheet to be submitted to the shareholders indicates a comfortable financial position and shows several interesting changes from last year. The company ended the year 1918 with $519,861 cash on hand, with no bank loans and with an excess of current assets over liabilities of more than $4,300,000.

The balance sheet shows an increase of over $630,000 in inventories and nearly $1,000,000 in accounts receivable. Another feature of the balance sheet is the disappearance in the 1918 exhibit of any allowance for deferred charges as against an item of $472,982 carried in the 1917 statement.

The President's report further states: "With the signing of the armistice work at the Toronto factory on munitions ceased. During the war period the effort of this department was concentrated entirely on the production of shells, thus contributing in a measure to the success of our armies in the field. We have put aside the sum of $150,000 for the purpose of plant rehabilitation and are already producing some of our established lines at Toronto. The outlook for the future is promising and we expect that the results for the coming year will be satisfactory."

News OF THE TRADE FOR THE TRADE

STERNS and McNutt, Charlottetown, Prince Edward Island, distributors for the Cleveland Tractors, Studebaker and Gray-Dort motor cars, opened a new show room the early part of April.

* * *

Grace Motors, Limited, has moved to new show rooms, at 226 Main Street, Winnipeg, Man.

* * *

Allen Jack, of the United Engines and Threshers, Limited, Alberta, took over the management of the Lethbridge office April 1.

* * *

J. W. Wyatt has purchased the interests of his partner, W. B. Peterson, in their implement business at Irma, Saskatchewan.

* * *

A change has taken place in the personnel of the Weyburn Motor Company, and hereafter it is announced that the partners will be E. G. Smith and Harry Jensen.

* * *

W. Crook and T. F. Baynton have leased the Craik Carriage Shop, Strathroy, Ontario, and opened up a first class garage and machine shop the first week in April.

* * *

J. and F. Azar have commenced the erection of a new garage and service station in George Street, Sydney, N.S., and expect to be ready for business by the middle of May.

* * *

J. D. Patterson, who has an enviable record as motor car salesman for Thomas Finley of Vancouver, B. C., has returned to his old position, after more than a year with the Royal Air Force.

* * *

The Dauntless Manufacturing Company, the Farmers' Company which is to manufacture farm implements and other steel products at Redcliff, Alta., expect to commence production within the next ten weeks.

* * *

The death occurred recently of John Fowell, one of the best known citizens of Woodstock, Ontario, who had been in the implement business for the past forty years. He was born in Beachville, in 1841, and is survived by three sons.

* * *

The Thos. A. Low interests in the Renfrew Machinery Co., Renfrew, Ont., have been purchased by M. J. O'Brien, Ltd., and F. D. Vickers has retired from the organization to look after other interests, being succeeded as managing director by H. A. Jordan.

* * *

Michigan constables have confiscated a Ford which had its gasoline tank privately fitted with an interior tank for the smuggling of liquor across the Michigan-Ohio border. It is also reported that a tank somewhat similarly constructed was caught by the officials of a Canadian border city.

* * *

It is reported from Peterborough, Ontario, that the plant of the Renfrew Manufacturing Company, formerly the property of the Canadian Cordage Company, munition manufacturers, has been purchased by a company manufacturing automobile trucks, and that this latter business will very soon commence active operation.

* * *

The United Engines and Threshers, Ltd., recently organized in Alberta, commenced business April 1, in Alberta and British Columbia, representing Goold, Shapley & Muir Co., Ltd., and the Waterloo Manufacturing Company, Ltd. This concern also has local representation in Calgary, Edmonton and Lethbridge. T. R. Scott, who has been with the Goold, Shapley & Muir Company for more than twenty years, is manager of the new concern.

Selling a Recognized and Profitable Line

Everywhere Implement dealers are making good, especially those that handle farm implements that have won the farmer's confidence. Our implements have stood the hardest work and for years we have manufactured farm implements which have carried the greatest praise from the farmers.

This means that when you handle a line that creates confidence you profit thereby, and now is your chance to procure an agency that will build bigger and better business.

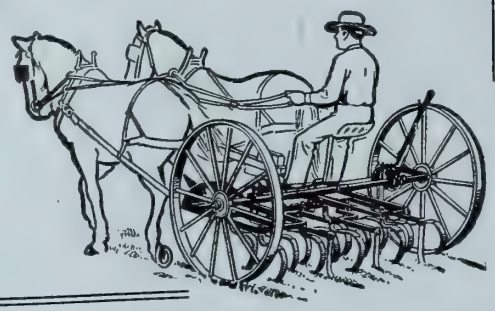
Peter Hamilton Farm Implements

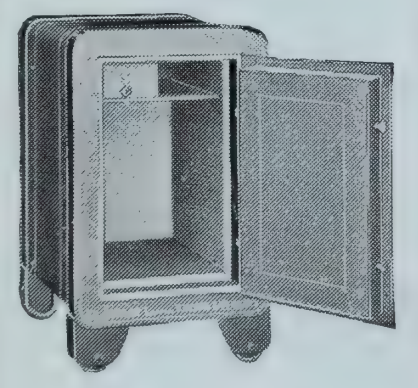
The Peter Hamilton Cultivators have a unique construction that adapts them to varying conditions and the hardest kind of work. We manufacture spring tooth and stiff tooth cultivators, scufflers, harrows, mowing machines, rakes, blowers and cutters. Every one is of durable construction and built to meet the demand of the heaviest work.

Write now, there is open territory for good dealers.

The Peter Hamilton Company Limited

Peterboro, Ontario





A safe place for valuable papers, sales notes, bonds etc.

Just Meets the Farmer's Need

A real made-in-Canada household fire-resisting steel cabinet, fitted with combination lock etc.

Implement Dealers:

If you are in touch with the farmers in your district, here is your opportunity.

Write for prices and full particulars

J. & J. Taylor, Limited
TORONTO SAFE WORKS
Toronto, Canada

Shaw's Auto Salvage Parts Supply Co.

923-927 Dufferin Street, Toronto
PHONE JUNCTION 3384

An efficient service intelligently rendered on all used parts.

GEARS, MAGNETOS, RADIATORS, SHAFTS, SPRINGS, CARBURETORS, BEARINGS, LAMPS, WHEELS

"ALL SERVICEABLE" NO JUNK

Correspondence Solicited. Inspection Invited
Prompt Deliveries. Money Back Guarantee. No advance in Our Prices.
Largest Stock in the Dominion. No sending of Wrong Parts is convincing enough for you to *Wire, Write or Phone*

Shaw's Auto Salvage Parts Supply Co.
923-927 Dufferin Street, Toronto
PHONE JUNCTION 3384 K-13

Repairs and Spares

Keeping Up Repairs

Many a dealer can benefit by urging upon the farmer the need for coming back to normal life as soon as possible. Sugestions of repairs may be in order at this time.

Four years of war have been a heavy drain on the farmer. In response to the cry for production, the farmer has put first things first and has let things go undone that in normal times would have received careful atention. Not only has he been himself driven through scarcity of help, but mechanics normally available to assist him, have been few and far between and he has been waiting for the price of materials to drop. The result is that buildings in many instances are sadly out of repair. On many a farm that has not resulted in loss, thanks to the good work done in pre-war times, but the time has come when the repairs must be made or buildings will rapidly lessen in value. Only those who have thoroughly gone over a building that has been neglected for a number of years are aware of the dirt that has accumulated and of the decay that has a way of setting in through lack of constant renovation. In no place is this tendency to go back more likely to be found than in the stables and hog pens.

Just now these buildings need to be looked over and provision made for repairs. All over the country there are men who need and who can perform just such work as the farmer requires. Men who have been employed as munition workers will need odd jobs to keep them going till such times as their employers will get into the stride of the regular line of trade. Prices have been good for the farmers and in no better way can they invest the little surplus the times have brought them than in getting ready for the new and better times ahead than by repairing their farm premises. No more patriotic service can be rendered than by providing work for the men whom the closure of the war inevitably throws out of employment.

Such repair and cleaning is all the more imperative now that we know so well that harmful bacteria lurk where farm dirt or moisture finds a lodgment. Cattle and horses die from these bacterial diseases that may well be saved by a little timely renovation. The expenditure of a few dollars in time and labor may mean the saving of the lives of valuable animals.

Shed For Machinery

A 22 per cent. return on a $400 investment pays well. That is the return which the agricultural engineering department of the Wisconsin College of Agriculture says a $400 machine shed will pay to a farmer who has $1,000 worth of machinery. This is the way they figure it:

The depreciation on $1,000 worth of machinery, well housed, is $90 a year. Poorly housed, the depreciation increases to $180 a year. The $90 difference in depreciation is 22 per cent. of $400, the cost of a good tool shed.

Cheap Inner Tubes

It is false economy to purchase cheap inner tubes because they will quickly put expensive casing in the scrap pile.

For Filling Radiators

An old sprinkling can or watering pot with the sprinkler head removed makes a very convenient device for filling the automobile radiator.

Bag For Inner Tubes

A soft flannel bag is one of the best things in which to keep spare inner tubes; the mouth should be tied around the projecting valve stem.

Washer Substitute

Sometimes washers are needed when none of the proper size are on hand. In this case, a good substitute may be made by wrapping several turns of wire about the bolt before the nut is put in place.

Marking Air Leaks

When inner tubes are immersed in water to locate punctures, make a mark around the leak with an indelible pencil when it is found. This will make the hole easily located when the repair is to be made.

To Remedy Overheating

Automobile engine overheating can sometimes be remedied by changing the pitch of the cooling-fan blades so that an increased amount of air will be thrown against the radiator. A little more twist will help considerably in keeping the engine cool.

To Clean Carbon Brushes

A very easy way to clean carbon commutator brushes is to insert a piece of sandpaper between the brush and the commutator, with the sanded side to the brush. Draw the paper back and forth until the dirt is removed. After cleaning the brush, be sure all grit is removed.

Motorcycle on Sand Roads

When riding over sand roads with a motorcycle, it is a good plan to let some of the air out of the tires, especially the front one, which should flatten quite a little. This will give more traction and may be practiced for a little while without injury to the tires.

To Remove Tar and Asphalt

In the course of a few months of use the farm automobile will become more or less spotted with drops of tar and asphalt. Do not try to remove these with soap because they will come set and make cleaning almost impossible. Rub tar spots with soft grease and do not try to remove them until the grease penetrates the tar. Remove the tar and grease with gasoline or by washing in hot suds. Asphalt spots should be well wetted with kerosene and left to stand. Later it can be washed off with turpentine or alcohol.

To Prevent Noisy Truck Chains

The annoyance of slapping or extremely noisy truck drive chains may be overcome by fastening a strip of leather of such thickness as to barely touch the chain to the circumference of the brake drum. Each chain link will touch the leather lightly as it engages its proper tooth, and in this manner the noise due to contact will be muffled to a large degree and chains will be made comparatively noiseless.

Remedy For Gasoline Leak

Sometimes a leak develops in a ground joint connection in the gasoline feed line which seems hard to remedy. Often the joint is in such a position that regrinding is almost impossible. In such a case I once used mucilage which had become thick to good advantage. A small portion was applied to the connection and allowed to harden slightly. The joint was then screwed together and the leak stopped.

Preventing Wear on Chains

Most of the wear on drive chains is caused by dust and dirt, and the wear is especially rapid when ordinary means of lubrication are used. In a recent test it was proven to my satisfaction that truck chains will last nearly twice as long as they otherwise would if they are removed and washed with gasoline, and then boiled in paraffin wax. When cool the wax becomes hard and keeps the bearings and moving parts well lubricated, stops much of the rattle, and furnishes a coat to which dust and dirt will not easily adhere.

It's a Kentucky philosopher who quotes a neighbor as saying that his county agent can't tell him nothin' about farmin' as he's wore out three farms already.

GOOD OILS TO SELL

IMPERIAL Farm Lubricants cover every lubricating requirement in the agricultural field — an enormous retail market that is not only constantly growing greater, but represents Canada's most prosperous producing class.

The high quality of Imperial Oils is established with multitudes of users to whom the name "Imperial" is as a guarantee. Our extensive newspaper and farm paper advertising is every day adding to the list.

We are educating the farmer on lubrication—telling him what each of his farm machines need in oil—tractors, stationary engines, threshers and automobiles. We are specifying Imperial Oils for each lubricating need.

Are you prepared to meet an increasing demand for Imperial Lubricants? When your customers ask for a special Imperial Oil, will you be able to supply them or will you be compelled to apologize?

Why not be prepared. Look to your Imperial Farm Lubricant stock to-day, and if it lacks any of the oils here described; why not make it complete. Imperial distribution insures you a ready supply of Imperial Oils at all times. It pays to sell them.

IMPERIAL FARM LUBRICANTS

IMPERIAL POLARINE AND IMPERIAL POLARINE HEAVY
For all gasoline-burning engines — automobiles, tractors and trucks.

IMPERIAL POLARINE A
For all motors requiring an unusually heavy oil.

IMPERIAL ELDORADO CASTOR OIL
A thick oil for worn and loose bearings.

IMPERIAL KEROSENE TRACTOR OIL AND IMPERIAL KEROSENE TRACTOR OIL EXTRA HEAVY
For kerosene-burning stationary engines and tractors.

IMPERIAL PRAIRIE HARVESTER OIL
A heavy-bodied oil for open bearings of threshers, binders and separators.

IMPERIAL CAPITOL CYLINDER OIL
For steam cylinder lubrication — tractors and stationary engines.

IMPERIAL STANDARD GAS ENGINE OIL
For stationary and portable engines using either kerosene or gasoline.

IMPERIAL THRESHER HARD OIL
For grease cup lubrication of bearings. A clean, solidified oil.

Imperial Farm Lubricants are for sale in ½, 1, and 4 gallon sealed cans, half-barrels and barrels.

IMPERIAL OIL LIMITED

Power - Heat - Light - Lubrication

Branches in all Cities

IN POSITION

The Super Spark does what the best of spark plugs unaided have not been able to do---provide always a steady, uniform spark.

The Super Spark

ends spark plug trouble; prolongs the life of the spark plug.

Recommended by the National Ford Owners Club of New York

This is not a spark gap, but a nitrogen transformer for tractor, stationary and marine engine users, as well as for motorists, thousands of whom are using it with perfect service. Recommended by university engineers and practical technicians. The Super Spark effectually prevents the fouling of plugs by oil pumping cylinders. It enables broken porcelains to work perfectly. It saves platinum and breaker points from burning and eating away; and it prevents burnt-out coils and punctured condenser.

NO MORE ENGINE MISSING
MORE NEW PLUGS
MORE CLEANING PLUGS
MORE CARBONIZED PLUGS

THE SUPER SPARK

Sold with a two-year guarantee. Prices, $2.25 each; or $9.00 for a set of 4.

SUPER SPARK COMPANY OF CANADA
44 Simcoe Street, Oshawa, Ontario

Eastern Distributor: Vlit Mfg. Co., 223 McGill St., Montreal
Western Distributor: Shell Supply Co., 509 McGreevy Bldg., Winnipeg, Man.
Exclusive representatives wanted for counties and townships

SPECIAL OFFER!

This ad and $1.50, mailed or presented to Oshawa office only, entitles holder to one Super Spark with full instructions.

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

IS

A CANADIAN COMPANY offering service of interest to and in the interest of Canadians.

Time payments made possible and profitable for Manufacturer, Dealer and Customer. Of particular interest to Automobile and Musical Instrument Trade.

LET US KNOW YOUR REQUIREMENTS

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

Bank of Hamilton Building, Toronto, Ontario

Important Information to the Automobile Owner

One of the essential features in the operation of a car is perfect lubrication.

This can only be obtained by the use of high-grade lubricants having the following qualities: Freedom from carbon—containing the essential lubricating properties—and having a proper amalgamation of the materials used in the manufacture.

In "1000 MILE" Lubricants you have a combination of the very best materials, both scientifically and chemically combined, all of which have been thoroughly tested and proven to be the acme of perfection.

If you cannot secure these from your dealer communicate direct with us and we will supply you.

MANUFACTURED BY

The Dominion Oil Co., Ltd.

HAMILTON, ONTARIO

Office: Royal Bank Bldg. **Phone Regent 1003**

Dairy *and* Household Supplies

H. A. McARTHUR STEPS UP

Congratulations are coming from the trade to Herbert A. McArthur, formerly general manager of the Empire Cream Separator Co. of Canada, Ltd., as another example of a Canadian who has made good as an executive head in Canada, and has been promoted to a high position with the parent company in the United States. Mr. McArthur has been chosen as the assistant general manager of the company for the United States and Canada, with headquarters at Bloomfield, N.J.

Mr. McArthur started his connection with the farm implement business in Sussex, N.B., where he was in business with his father, and afterwards travelled for the Sharples Company. Later he was connected with the Renfrew Machinery Company, Renfrew, Ont. In the year 1912 when the head office of the Empire Cream Separator Company was in Toronto, Mr. McArthur was chosen as manager and in the fall of 1914 they moved their headquarters to Montreal, where the business is now being conducted. During the past four years or so he has shown an increase in business of nearly $300,000 or an average of about $75,000 a year.

His successor as general manager for Canada is W. J. Hemphill, who before he joined the Empire Co. forces was with the Deering, De Laval and Sharples organizations.

MANAGING "VIKING"

The Swedish Separator Company, Chicago, manufacturers of the "Viking" cream separator, announce that E. F. Strachan, until recently manager of the John Watson Manufacturing Company, Winnipeg, (for the past four years distributors for the Viking separator), has been appointed manager over all Viking sales in Canada, with a territory which stretches from Halifax to Vancouver. Mr. Strachan will make his head office in Winnipeg, where he is exceptionally well known and liked by every one, especially those in the farm machinery trade. He was born in Paisley, Ontario, but went West as an infant more than forty years ago.

SEPARATOR CLEANLINESS

"In all my experience," says H. F. Disney, of Whitby, Ont., "I have had only two perfectly clean cream separators in old returned machines from the farmers.

"And perhaps herein lie some of our own butter troubles. A great many of these separators are scrapped because the farmers have been careless with them. They have not oiled them properly nor had them sitting level, or in a dry place. Too many farmers are content to put their cream separators in the cellar or in some stall where all sorts of filth accumulates. The spilt milk soon makes an undesirable situation."

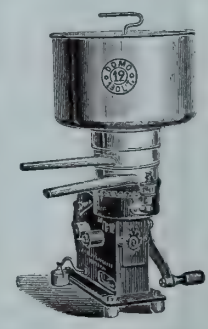
"Just how does the machine get dirty?" we asked.

"It takes only a little milk to get in past the spindle in the crank case where the oil is and this soon decomposes and is churned into the oil until constant use makes a very undesirable crank case interior. Every cream separator should have the oil taken out and washed with coal oil four times a year. This oil is not lost, for it can be used on the rougher farm machinery."

MACPHERSON PROMOTED

WINNIPEG, Man.—D. MacPherson, who has been associated with the Massey-Harris Company in Winnipeg since April, 1904, and for several years has been branch manager in this city, has been promoted, and recently left to assume his new duties as assistant manager in Ontario. Mr. MacPherson was raised in East Valleyfield, P.E.I., and after a public and high school education wound up with honors from Prince of Wales University, Charlottetown. After a brief experience in the teaching profession went West in 1904, and joined the Massey-Harris organization. Prior to his departure from Winnipeg, Mr. MacPherson was entertained by the manager and staff and, as a token of the respect and esteem in which he and Mrs. MacPherson were held, presented with a handsome cabinet of silver.

The New Model "DOMO" CREAM SEPARATOR



is about as perfect as can be made. The self-balancing bowl has larger diameter discs. Skimming capacity is increased 10 to 15 per cent. The temperature is much lower. The machine is self-oiling with one single oiler. Moderate prices. Parts supplied for old and new Domo machines. Write to

DOMO SEPARATORS
St. Hyacinthe, Que.

Mr. Dealer!

IF

Price
Quality of Material
Workmanship
Close Skimming
and
Easy Turning

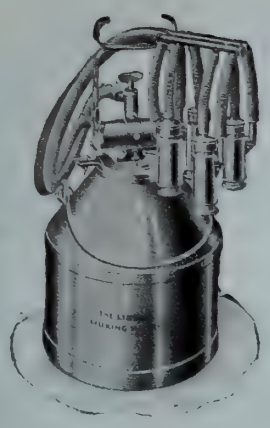
are considered by your customers in buying a Cream Separator, then we claim that the

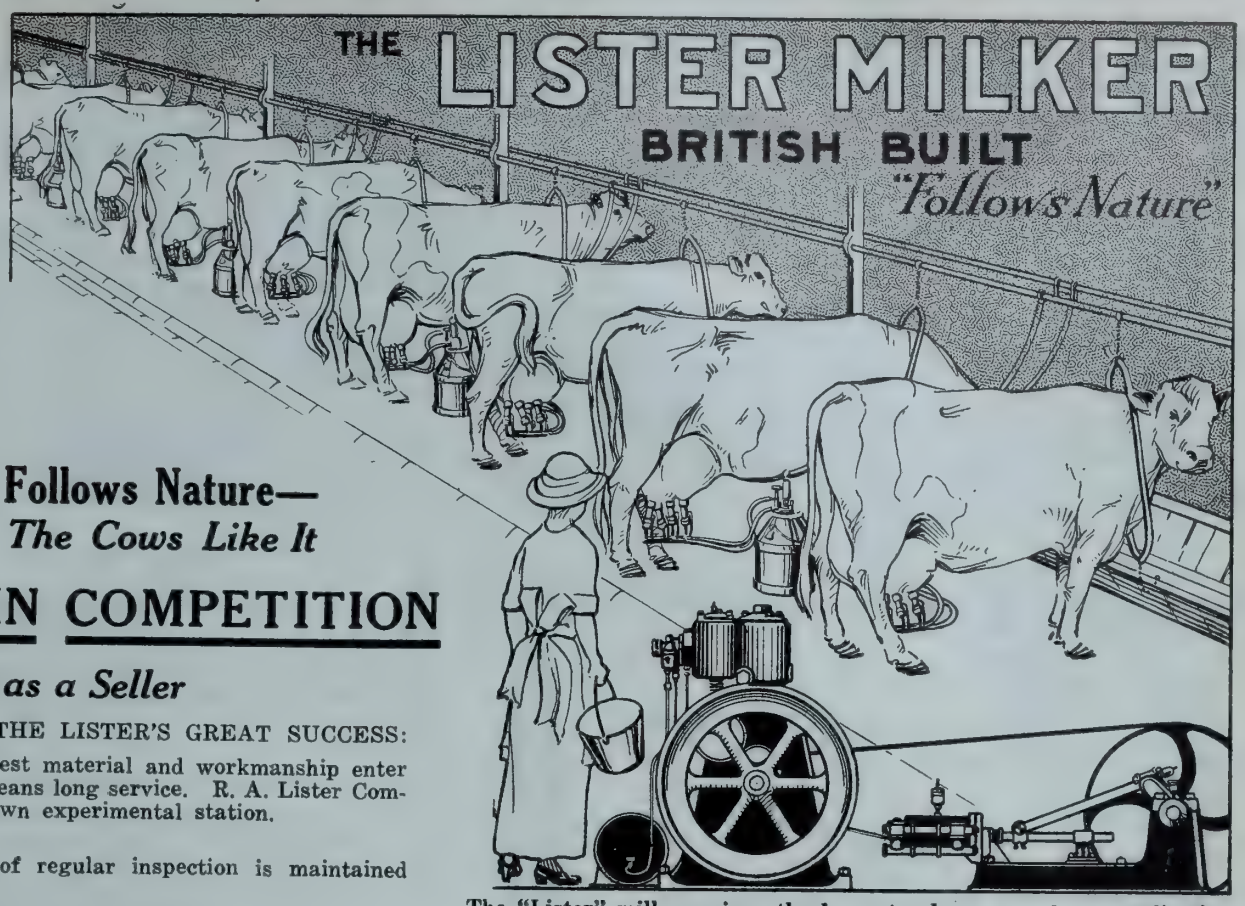
Sanitary King

is the best buy in Canada to-day. Write for prices and terms.

--

King Separator Works of Canada
Limited
Bridgeburg or Whitby, Ont.





Follows Nature—
The Cows Like It

NEVER BEATEN IN COMPETITION

Unexcelled as a Seller

HERE ARE THE REASONS FOR THE LISTER'S GREAT SUCCESS:

British made throughout. Only the best material and workmanship enter into its construction. Lister quality means long service. R. A. Lister Company at enormous expense maintain own experimental station.

Easy to operate—Easy to clean.

Installed by experts—and a system of regular inspection is maintained by company.

Every machine sold makes a friend of the purchaser.

The "Lister" milker enjoys the largest sale among the most discriminating farmers of the world.

R. A. LISTER & CO. (CANADA) LIMITED

58-60 Stewart Street, TORONTO — **Also at Wall Street, WINNIPEG**

LISTER ENGINES :: AVERY TRACTORS :: LISTER GRINDERS :: MELOTTE SEPARATORS

STINSON TRACTORS

18--36

No Exposed Gears—Dust-Proof. Sold at American Prices to Farmers. Made in Alberta. Adopted and Handled by Saskatchewan Grain Growers, Who Have Purchased 90 for Their Trade.

Beaver Motor. Dixie Magneto-Kerosene

Live Agents Wanted in Manitoba and Alberta

MARTIN & PHILLIPS

MEDICINE HAT, ALBERTA

"The Tractor Centre of Canada"

To
Messrs.
Martin & Phillips
Medicine Hat, Alta.

Send me your Dealer Plan on Stinson Tractors.

Name . . . . . .

Address . . . . . .

C.M.T.

"NIAGARA" ACCESSORIES

No. 128

THERE IS SATISFACTION
for both you and your customer in handling good goods.

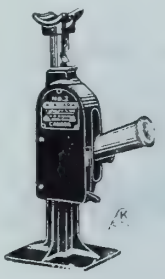
"NIAGARA" JACKS

are dependable and give real service.

OUR SIX MODELS

provide range enough for all purposes, and every jack will do all that is claimed for it.

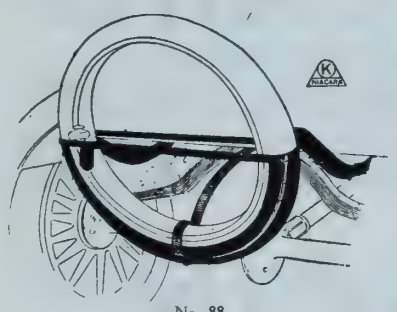
"NIAGARA" PUMPS



No. 127

are in a class by themselves. Tires are easily inflated in the fewest possible strokes. Only *Chrome Tanned Leathers* are used and these are both long-lived and efficient.

Users of Niagara Pumps are assured of
DURABILITY AND EFFECTIVENESS



No. 88

"NIAGARA" TIRE CARRIERS

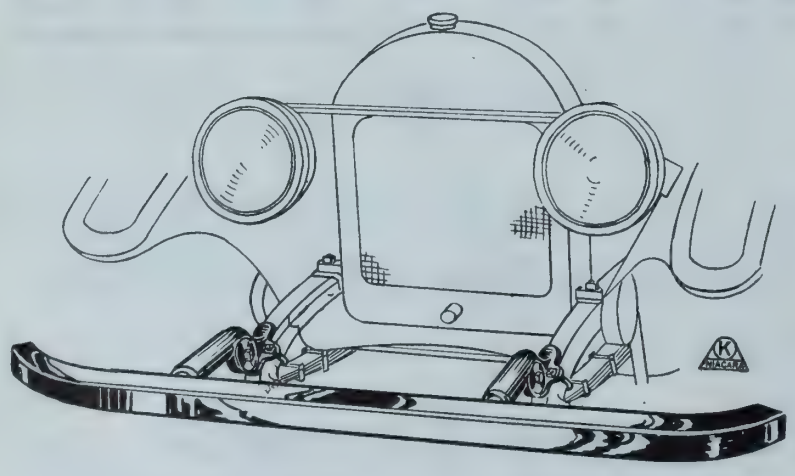
FOR FORD CARS

are the best yet! Strong and rigid. Easily attached. Adjustable for plain casings, demountable rims or spare wheels.

"NIAGARA" BUMPERS

are built in suitable styles for all makes of cars, and in several styles of bars. Catalogue on request.

FINELY FINISHED AND DURABLE



MANUFACTURED IN CANADA BY

Kinzinger, Bruce & Co., Ltd.

NIAGARA FALLS, ONTARIO

Specify "Niagara" Brand to your Jobber, or write us direct

Accessories and Parts

TRADE LOOKS BRIGHT

The trade has opened up in earnest and the dealer who has not been afraid to purchase an adequate supply is cashing in on the business. In the hand-to-mouth purchasing, one must be more than humanly alert and shrewd not to miss sales. Accessory business is decidedly good this season. A live dealer, in one of the smaller Ontario cities, reports that he did more than $7,000 worth of business during April, in accessories alone.

BUSINESS LOOKS GOOD

Mr. Dixon, of Hyslop Bros., Ltd., reports a good business outlook for this time of the year. Accessory trade with 20,000 to 30,000 more cars in Ontario will develop considerably more business during the year. Every dealer will be working to get some of this new business.

BEING ON THE JOB

"I generally try to carry in stock something of every line of accessory for the emergency sale," says W. F. Disney of Whitby, Ontario. "Often an unexpected call comes in at the tail end of the day, and the fact that I have the accessory desired makes a ready sale. In such a case it is of no use to me to be able to get this by the first express. I have to have the goods in stock. I can immediately secure its duplicate by wire if I am short."

LOCKS FOR CARS

There are many locks for cars on the market. A recent one, a gear-shift lock put on the McLaughlin cars, seems to be an ideal one for centre control levers. It locks the gears and levers in neutral, and he has to be a bad crook, indeed, who can get away with a car so locked.

A NEW WRINKLE

Some drivers are putting an inexpensive contrivance on their manifolds which they say saves them considerable in gasoline and carbon troubles. The principle admits moist air to the manifold by means of a pit cock attached to it, and connected by rubber tubes to a jar of water through which the air passes.

FOOT RAILS

Many a driver of a car will put in a robe or a foot rail if you suggest it to him. The same thing applies to tire tools, bumpers, tire carriers, and jacks. Automobile equipment of all kinds is sure to be in demand along all leading roads.

AUXILIARY RADIUS ROD

Some firms do profitable business in an auxiliary radius rod for Ford cars. These rods are used for re-inforcement, to prevent bending or breaking of the regular radius rods. They also help to steady the steering. There are two patterns, the round tubular and angle iron.

BICYCLE BUSINESS GOOD

T. A. Russell announces that the Canada Cycle and Motor Co.'s production is being maintained at full capacity, and that there is a large market for the products of this industry. A representative of the company will leave shortly for Australia, there to secure business which is now offering.

FIRE EXTINGUISHER

Did you ever try to sell a farmer a chemical fire extinguisher for his barns and stables, or in his house, with instructions about how to use it? This is a service that ought to be appreciated by the insurance companies. Many fatalities might be prevented by the intelligent use of such extinguishers.

KEYLESS CLOCK

The latest flush-type automobile clock, the Pop-out Keyless, has a black dial 2¼ in., with white numerals and hands, or is furnished with black dial with radium numerals and hands. To wind the clock give a half turn to the left and the clock pops out, making it very convenient to turn the rim when winding. The clock can be set by pulling the same

Pop-Out Keyless Auto Clock

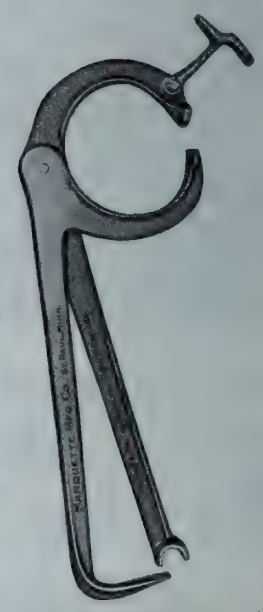
rim out further and turning either way to alter the hands. When the rim is returned to its place after winding it presents a flush appearance. It has already met with appreciation from manufacturers and users of automobiles.

The Canadian agents for this clock are E. and A. Gunther Co., 310 Spadina Ave., Toronto.

MARQUETTE TIRE TOOL

The "Easy Off and On" is the name of a new tire tool manufactured by the Marquette Mfg. Co., St. Paul, Minn. The work of changing tires is greatly simplified by this tool, which is shown herewith.

In taking the tire off, place the jaws over tire, grip the tire as close to the rim as possible, squeeze handles tight



The Marquette "Easy Off and On" Tire Tool

without pulling either direction. Move handles toward outside of wheel so as to loosen inner bead of tire from rim; then move handles of tool in toward car, this will loosen outer bead of tire. At the same time place shoe under the two beads and rest on edge of rim, then proceed to throw off the tire.

In putting the tire on, place tire on rim, see that the beads at valve stem are securely in place, screw lock nut on valve stem and tighten. Put tire on as far as possible, then proceed with the tool.

Maybe Adam Laughed at These!

PA'S ANSWER

"Pa, what are cosmetics?"

"Cosmetics, my son, are peach preserves."

* * *

AFTER THE WAR

Forty acres and a tractor,
Surely that should be a factor
In assisting soldier laddies
To be useful men and daddies.

—*Judge.*

* * *

A REACTIONARY

"Why did your hired man quit?"

"He was too easily discouraged," answered the up-to-date farmer. "He said he'd spent 20 years trying to understand a mule and he'd be dadblamed if he would tackle a tractor at his time of life."—Birmingham *Age-Herald.*

* * *

A NON-STOP RUN

"Why didn't you stop when I signalled you?" inquired the officer.

"Well," replied Mr. Chuggins, "it had taken me two hours to get this old flivver started, and it seemed a shame to stop her merely to avoid a little thing like being arrested."—Washington *Star.*

* * *

AND PUT ON ANTI-SKIDS

She: George, dear, here's a scientist who says the earth is wabbling on its axis. What do you suppose they can do about it?

George (absently); Open the muffler, reverse the lever, shut off the power, lubricate the bearings, and tighten the wheelcap.—Cleveland *Plain Dealer.*

* * *

A CURE FOR ROAD HOGS

"Do you think there's any chance for me to buy one o' them tanks?" asked Farmer Cobbles.

"Why, I don't know. What in the world do you want with a tank?"

"I'm tired o' these road hogs in big tourin' cars crowdin' my flivver into ditches. I'd like to jog down the road a piece in a tank just to see what would happen."

* * *

NO SUCH MISTAKE FOR HIM

The stingiest man was scoring the hired man for his extravagence in wanting to carry a lantern in going to call on his best girl.

"The idea!" he scoffed. "When I was courtin' I never carried no lantern; I went in the dark."

The hired man proceeded to fill the lantern.

"Yes," he said sadly, "and look what you got."—Heald *Herald.*

* * *

WEBSTER—A LA COCKNEY

Two English costermongers were pushing their carts along, when one of them picked up a torn sheet of newspaper. As he stopped and scanned the page the other fellow called out impatiently:

"Aw, come on! Wot ye trying to do? Ye cawn't read the pyper."

"I can so read the pyper! If ye don't believe me I'll show ye." And he read off a few simple words.

The skeptic pointed to a word and demanded: "Now, wot's that word—can ye tell me?"

"An' I can so," replied the reader; "thot's *categ*ory."

"Category, is it?" sniffed the other; "an' 'ow do ye tell wot such a long word may mean?"

His friend puffed with importance.

"Well, I'll tell ye. Ye takes hit hapart, an' ye find the meanin' of heach part an' then ye puts hit together hagain."

With a dirty index finger he pointed out the syllables of the word. "Now, *cat.* Ye knows wot a cat his?" The open-mouthed listener nodded.

"Well, then, next comes *'e.* Now that won't be no *she* cat; hit's a *'e* cat—see?" Another nod was the reply.

"Well next his *g-o-r-y.* Thot spells gory; thot means bloody. So there ye 'ave hit—hit's a bloody tom cat, ye fool."

Do You Want A Share of $15,000,000?

That is the amount of money going to be spent in Canada this year for tires and auto accessories.

The wise dealers, the careful buyers are going to get a big share of this $15,000,000.

We think so much of the possibilities of this year's business prosperity that we have moved to premises five times as large as we formerly occupied. Our buyers have gone out in the open markets purchasing thousands of accessories, taking in many cases factory outputs. All these goods are in our warehouses ready to ship, and ship at once.

Close buying, direct contact with the manufacturers, paying spot cash has saved for us thousands of dollars. All this means big money for our customers. **We are able to sell and deliver high grade accessories, tires, etc., at prices that cannot be duplicated in Canada.**

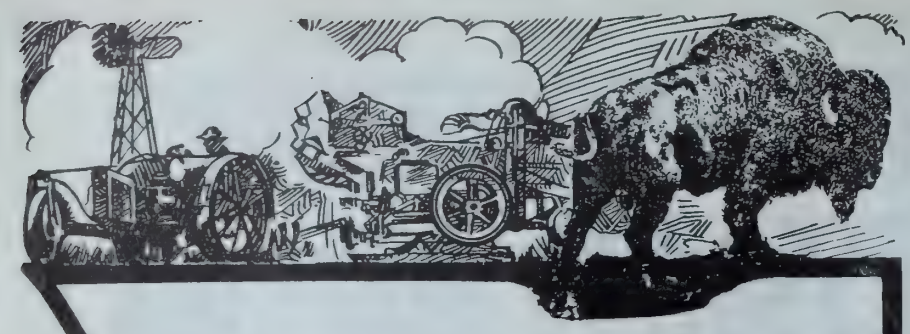
CROWN CUSTOMERS are the prosperous dealers in your town. They have grown from small one-man concerns into prominent merchants. They are successful men. **NOW IS THE TIME** to get ready for your share of this big business. WRITE TO-DAY for **"MOTOR SNAPS,"** our monthly medium, crammed full of accessories, tires, etc., of every description. **"MOTOR SNAPS"** is our little salesman, issued every month, showing everything that is new and of interest to our customers, reaching our friends throughout the entire Dominion. **The Biggest Money-Saver you ever saw.**

"Goods Well Bought Are Half Sold"

Crown Cycle & Motor Company

319 Craig Street West **Montreal, Canada**

PEERLESS PERFECTION
PEERLESS FENCE
FOR CANADA'S BROAD ACRES
Put up a fence that will last a lifetime—a fence that can't sag or break down—that will hold a wild horse—that hogs can't nose through—that can't rust—a fence that stands rough usage by animals or weather and is guaranteed. PEERLESS PERFECTION Fencing is made of Heavy Open Hearth Steel Wire with all the impurities burned out and all the strength and toughness left in. Heavily galvanized. Every intersection is locked together with the Peerless Lock.
Stiff stay wires keep it rigid, making fewer posts necessary. Send for Catalog today. It's attractive, interesting, well worth the stamp. Best dealers throughout Canada handle our complete line.
THE BANWELL-HOXIE WIRE FENCE CO., Ltd.
Winnipeg, Manitoba Hamilton, Ontario



MADE IN CANADA

BUFFALO OILS

Quality Oils for Every Farm Purpose

You cannot get the best results in your machinery operations unless you use **quality** oils and greases. The quality of BUFFALO OILS has been thoroughly proven —they are Western Canada's favorite brand.

There's a Buffalo Oil or Grease to meet every requirement of the farm. Put them to the test.

BUFFALO OILS INCLUDE

Automobile Oil	Gasoline Burning Oils
Tractor Oil	Transmission Greases
Gas Engine Oil	Cup Grease
Steam Cylinder Oil	Crank Pin Grease
Machine Oil	Graphite Grease

PRAIRIE CITY OIL CO., LIMITED
Winnipeg - Manitoba

Manufacturers SEEKING LOCATIONS

Our whole organization is free to bona-fide parties seeking industrial locations. We can save you time, travel and correspondence.

Complete, up-to-date information on shipping facilities, power rates, labor conditions, raw materials, factory sites, municipal inducements, etc., for every commercial centre in Ontario.

Complete details, plans and photographs of over 60 available vacant factories in Ontario, 1,000 to 100,000 square feet floor space.

Tractor manufacturers will find in Canada a splendid field, with special advantages for Empire and Overseas trade.

Consult us. It will pay you.

Heaton's Agency. Industrial Dept.

Publishers of Heaton's Annual (The Boards of Trade Register), Etc.

32 Church St., Toronto

BIG KITCHENER SHOW

KITCHENER, Ont.—Dr. P. E. Doolittle, founder of the Ontario Motor League, officially opened Kitchener's first annual automobile show April 21. W. G. Robertson, secretary of the Ontario Motor League, also delivered an address. The speakers were introduced by E. C. Kabel, president of the North Waterloo Motor Club. Dr. Doolittle declared that Kitchener's show is the finest exhibition since the war and predicted that it is likely to hold the record for Canada this year. Between forty and fifty exhibitors are showing, including pleasure cars, business cars, trucks, bicycles, motorcycles and general accessories.

TRACTORS AND "SPUDS"

Can a tractor be used efficiently with a potato digger?

Will it save labor? Time? Money?

C. C. Dawson, superintendent of the Guelph Soldiers' Farm, answers all these questions in the affirmative. Last year, under Mr. Dawson's supervision, twenty-five acres of potatoes were grown, and more than 90 per cent. of the crop was dug with an Aspinwall digger drawn by a tractor, and operated by one man. The results were entirely satisfactory, and Mr. Dawson concludes from his own personal observation that a tractor will enable him to dig one-third more potatoes per day, and do better work than the same digger operated by four horses and two men.

Result:

Time saved.

One man's labor saved.

Four horses dispensed with (and thus a big saving in their feed, as well).

Work *better* done.

SAWYER-MASSEY CO.

MONTREAL, P.Q.—The report of the Sawyer-Massey this week indicated how seriously war conditions and the abolition of duty on small tractors affected the affairs of that concern. At the same time analysis of the statement shows that the loss of $77,236, before depreciation, was largely the result of some house-cleaning in relation to the company's affairs, it being pointed out on behalf of the directors by N. W. Hutchison, reporting in the absence of president R. Harmer through illness, that, had it not been for allowances for readjustment of stocks and materials, earnings of $177,036 might have been reported. Thus it is evident that the company has faced the situation and, although the outlook for the future is rather uncertain, the worst period has probably been passed, particularly if the Government shows a disposition to place a tariff on tractors.

McKINNON INDUSTRIES

The McKinnon Industries, Limited, of St. Catharines, Ontario, have launched a programme of interest to automobile, truck and tractor manufacturers throughout the country. During the period of the war approximately 65 per cent. of their production found its way to the battlefields in France, and during the later months of the war they were producing 1,100 of the 6-inch Mark XI shells daily for the British Government and some 5,000 sets rapid release artillery harness forgings for the United States Government.

Now their attention is being directed toward the production and manufacture of automobile parts which heretofore have been purchased in the United States. The installation of equipment for the manufacture of the Boblett type radiator in Canada is a step toward producing what is claimed to be one of the best radiators known to automobile engineers up to the present date. The core of this radiator is manufactured on patent automatic machines, and the construction of the core when complete is of individual cells, and if damaged, is very easily repaired. This plant is now producing the radiators and will make a more complete announcement in the near future.

The McKinnon concern also is installing up-to-date equipment for the construction and manufacture of forged cut gears used in the rear axle assembly of all automobiles, together with the transmission gear and those used on the steering apparatus. It is the intention to offer the trade a quality article that may be used on all Canadian automobile products.

Dreadnaught tire chains are manufactured by the McKinnon Columbus Chain, a subsidiary company of the McKinnon Industries. Chains of all descriptions are manufactured by the electric welding process—from the small chain-lead for a puppy dog to the strong anchor and crane chains used by the navy.

The McKinnon Companies are very optimistic over the future of Canadian automotive industries, and are planning to produce Canadian-made goods for the requirements of the Canadian markets.

WEST BUYING HEAVILY

WINNIPEG, Man.—Implement sales in Winnipeg, which may be taken as an accurate reflection of farm activities throughout the Canadian West, have shown a decided increase since the first of the year. Last year was a big one, dealers say, but this year promises to be even better. The fact that implement prices are high and must necessarily remain so until steel and labor come down, is not discouraging farmers in buying the machinery required for the handling of increased acreages, it is said.

The business in small farm tractors is particularly active, agents assert, the reason generally given being the high cost of horses and feed.

Stinson Puts "Hat" on Tractor Map

Continued from page 18

the best articles on each process of manufacture, to be written after they had made an inspection of the respective plants. He also pointed out the value of having all grown-up residents know the details of each industry so that when they were abroad through the country they could give an intelligent and comprehensive exposition of them to outsiders.

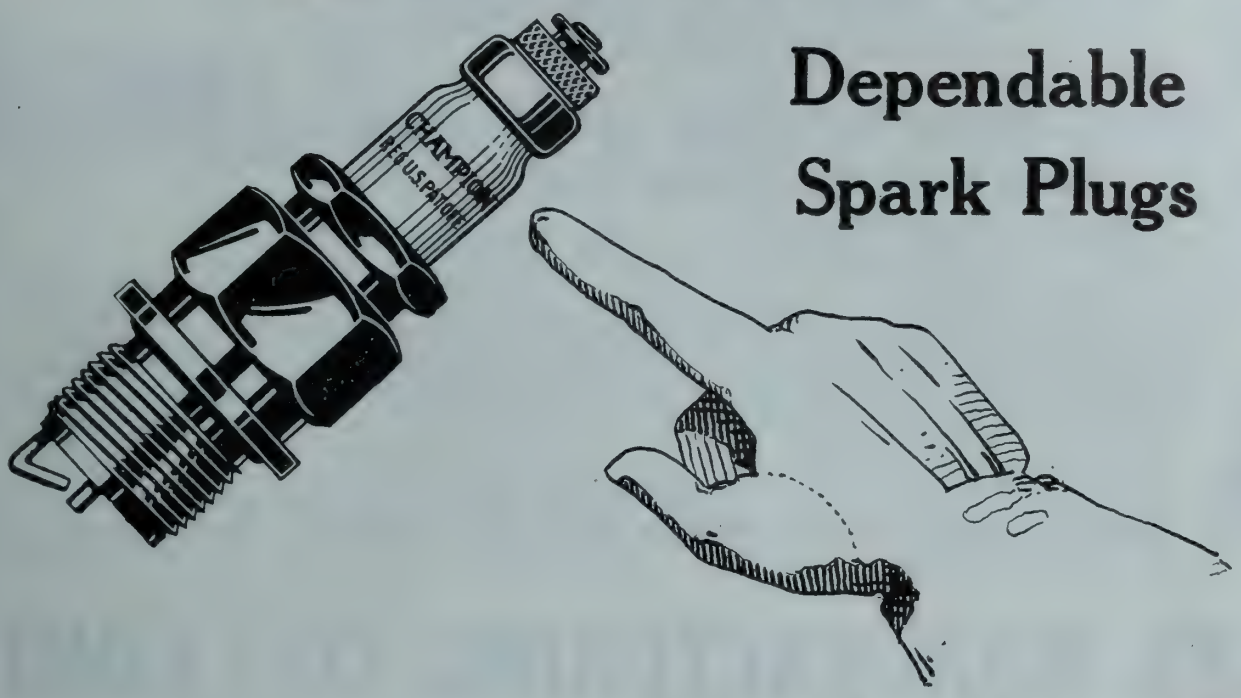
Information dispersed in this way, he said, would undoubtedly be of value as it would be given in a casual way, whereas the talks put up by an industrial commissioner would be depreciated by the fact that those interested would know it was being paid for.

Those in attendance at the luncheon were in hearty sympathy with the remarks and passed a resolution recommending that Medicine Hat have an annual demonstration day, and that the Board of Trade take the matter up with a view to its consummation.

MR. STINSON, Mr. Martin and Mr. White, all emphasized the statement that it was not their idea to monopolize the demonstrations, but rather to encourage the exhibition of other machines. Col. Nelson Spencer, M.L.A.; Walter Huckvale, president of the Western Canada Irrigation Association, and acting mayor of Medicine Hat; Chas. Pratt, president of the local branch of the Canadian Manufacturers' Association: R. C. Black, of the School Board; Ald. McLarty, Guy Herbert, of the Canada Land and Irrigation Co., and others endorsed the idea, Mr. Huckvale promising the support of the City Council. So it is a certainty that Medicine Hat will continue with these demonstrations and, as we said at the beginning the present one has gone a long way toward putting this energetic town on the industrial map. The citizens themselves are "sold" on the idea, and when this bunch starts anything, you can bank on it that they are going to finish it and do the job right.

We almost forgot to mention that the Fordson turned up later in the day, and tore up several rounds of earth, in conjunction with the Oliver outfit, and did it well, too. Moving pictures were taken of the whole demonstration, and they will be shown later throughout Alberta, Saskatchewan, and Manitoba, commencing about June 1.

Champion



Dependable Spark Plugs

That's the Plug

That's the plug that is standard equipment on four out of every five gasoline motors and engines in use. That's the plug that guarantees greater motor efficiency. That's the plug with the indestructible 3450 insulator—the result of ten years research and 3450 exacting experiments.

That's the plug with the patented leak-proof asbestos-lined gaskets.

That's the plug which offers you the greatest sales possibilities, because those who know its dependability demand it for replacements.

That's the plug which means satisfied customers because of our unqualified guarantee of dependability.

That's the plug that brings business to you and means bigger profits. not only in the sale of spark plugs, but in other accessories, because the man who uses Champions knows that the dealer who sells them must carry other dependable lines.

Stock Champion Plugs and capitalize these facts and our big promotion campaign in building a bigger business and more profits.

Order now from your jobber.

Champion Spark Plug Co. of Canada, Limited

WINDSOR - - ONTARIO

—JOHN DEERE-
DAIN
RAKE-BAR
HAY
LOADER—

—The Original
Rake-Bar
Loader—

Commonly
Known as
"The
One-
Man
Hay-Loader."

JOHN DEERE

WELLAND, CANADA.

THE TRADE MARK OF QUALITY
MADE FAMOUS BY GOOD IMPLEMENTS

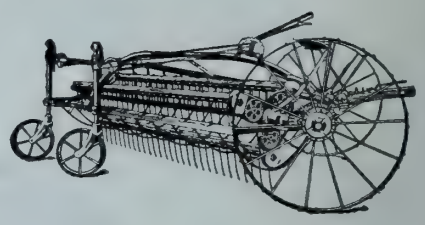
THE DAIN SYSTEM OF MAKING HAY IS NATURE'S WAY

MAKING HAY WITH JOHN DEERE-DAIN HAY TOOLS SAVES LABOR AND INCREASES ITS VALUE FROM $4 TO $8 A TON.

These machines are the result of forty years of study and experience in the making of hay machinery and are warranted to satisfy the most particular farmer. Dealers who handle Dain Hay Tools or any other John Deere machine is assured of easy sales, and he knows that they stay sold. Our Dealers' Service Department is of great benefit in giving your customers the greatest of satisfaction and good service, and our system of advertising is unequalled. With new transfer warehouses at Ottawa and Carleton Place, Ont., we are in a position to give a 24-hour service on machines and repairs from all over Ontario. If there is not a John Deere dealer in your locality, get in touch with us at once, as we want a real live dealer in every town in Ontario. Drop us a line and we will mail you beautifully illustrated literature on our John Deere lines of "Quality" farm implements, including Hoover Potato Planters and Diggers—Van Brunt Grain and Fertilizer Drills, Corn Cultivators and Planters—Manure Spreaders—Harrows, etc. Let us hear from you.

Give the Farmer
What He Wants.
Increase Your Sales.

—Labor-Saving
Machines
Which
Combine
Exclusive
Features—

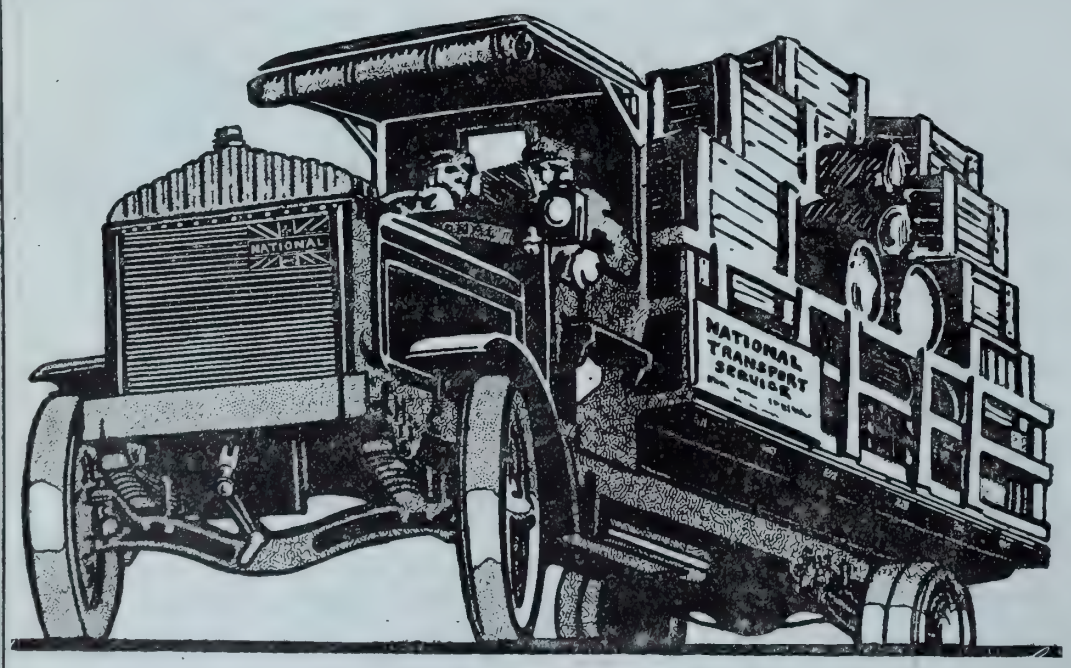


—John Deere-
Dain
System
Left Hand
Side Delivery
Rake—

—Strong—
—Durable—
—Efficient—

JOHN DEERE MANUFACTURING CO., LIMITED

WELLAND - - - - - - ONTARIO



Always
"on the Job"

How many days last year was your motor truck idle—waiting for repair parts to cross the border?

You can avoid all such gaps of idleness and reduce your haulage expenses to the minimum by buying a National Motor Truck.

NATIONAL TRUCKS
ARE BUILT IN CANADA

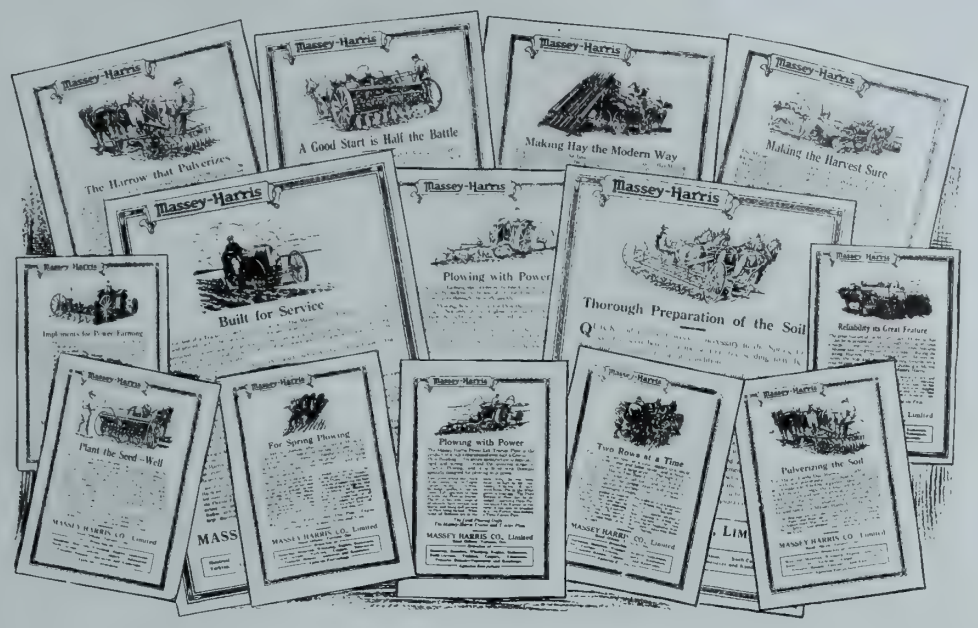
They are especially designed to meet Canadian conditions and are composed of standard unit parts, all of which can be obtained immediately from our factory in Hamilton, without delay and without the bother of paying duty. The owner of a National Truck has solved his haulage problems regardless of weather, distance or conditions of streets and roads. He is sure of a truck "always on the job" every day in the year, and twenty-four hours a day if necessary.
National Trucks are built in six models—1-ton, 1½-ton, 2-ton, 3½-ton, 5-ton trucks and 6-ton tractor. There is a National Truck that will exactly take care of all your haulage requirements.

Write for Illustrated Catalogue and Name of the Nearest National Dealer

NATIONAL STEEL CAR COMPANY, LIMITED
HAMILTON, CANADA

What Trucks—Ask the Driver—*He Knows*

Massey-Harris



Ads that Help the Implement Dealer

THE advertisements reproduced above are a few of a series now appearing in all of the leading Farm papers.

Every Implement Dealer realizes how much easier it is to sell a well advertised line of implements. This is because the "Prospect's" mind has been favorably impressed by reading the ads, and in fact, in many cases, the reading of the ads creates your "Prospect."

This farm paper series, together with our Direct-by-Mail Advertising, consisting of numerous, attractive folders, are a powerful factor in preparing the way for the Massey-Harris Agent and making it easy to sell Massey-Harris Implements.

No need to explain who Massey-Harris is, and what the name stands for. It is known to all farmers and stands for the best in farm implements, and has done so for generations.

Applications for representation in vacant territories should be addressed to the manager of the branch nearest you.

High Quality Implements—Well Advertised

MASSEY-HARRIS CO., LIMITED

HEAD OFFICES—TORONTO, ONT.

Branches at

Montreal, Moncton, Winnipeg, Regina, Saskatoon, Swift Current, Yorkton, Calgary, Edmonton. *Transfer Houses*—Vancouver and Kamloops

Big Money Easily Made

LAY Porta Power is a Quick-Selling Farm Necessity

YOU know the tremendous demand for dependable farm engines. You know many farmers in your district who own an automobile.

Lay Porta-Power is an automobile accessory that makes the engine of an automobile do the work of a 10 H. P farm engine---and better.

No farm engine can equal the automobile engine for power, low fuel consumption, flexibility in speed.

Lay Porta-Power utilizes this excellent power---makes it do all the farm work for which power is necessary.

Lay Porta-Power is cheap, sells at $48. West of Winnipeg $58.---less than one-fifth the cost of a farm engine giving anywhere near the same power.

We Want Live Dealers

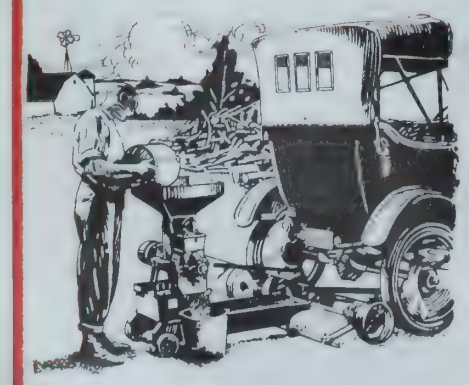
If you think you are the man to handle Lay Porta-Power in your district---if you want the big money there is to be had in Lay Porta-Power---if you are willing to put forward an honest effort---write immediately for further particulars.

A sweeping campaign of compelling advertisements telling about Lay Porta-Power has just started.

LAY Porta Power

Be in on the first big drive, Write to-day.

$48 f.o.b. Toronto. West of Winnipeg $58



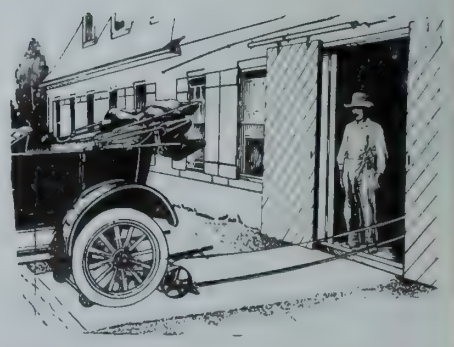
GRACE MOTORS

LIMITED

243-255 Queen Street East, TORONTO
236 Main Street - - WINNIPEG

Distributors

J. H. Ashdown Hardware Co.,	Calgary,	Winnipeg,		Saskatoon
Western Motor Supply	-	-	-	Regina
Edwin Chown & Son	-	-	-	Kingston
Keyes Supply Company	-	-	-	Ottawa



CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Published Monthly by THE MACLEAN PUBLISHING COMPANY, LIMITED, TORONTO

MONTREAL, Southam Bldg. WINNIPEG, 1103 Union Trust Bldg. VANCOUVER, 39 10th Ave. West. LONDON, ENG., 88 Fleet St., E.C. 4. NEW YORK, 111 Broadway. BOSTON, 734 Old South Bldg. CHICAGO, 1401 Lytton Bldg.

VOL. 1, No. 4 TORONTO, JUNE, 1919 Subscription Price $1.00 Per Year

Reliable Power at Low Cost

Cut your power costs by reducing the cost of your fuel. This is the object of the

Fairbanks-Morse Type "Y" Oil Engine

The principle of operation of this engine is one of money-saving—the cheapest of fuels, no carburetor, mixers, timers, igniters, spark plugs or magnetos.

The Type "Y" operate on the two-stroke, moderately high pressure principle, with the fuel injected under pressure and the amount positively governed in proportion to the load. The heat remaining in the combustion chamber, together with the high compression of the air, ignites the oil, which burns with more of an expansive pressure than the explosion in the ordinary combustion engine.

The Type "Y" burns Fuel Oil, Crude Oil, "Solar" Oil, Stove Oil, Gas Oil, Engine Distillate or Kerosene.

10, 15, 20 and 25 H.P.

The Canadian Fairbanks-Morse Co., Ltd.

"Canada's Departmental House for Mechanical Goods"

Halifax, St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria

Friend Wheatley is RIGHT

Progressive dealers will be interested in the following letter from a North American dealer, H. D. Wheatley, of the H. D. Wheatley Company, at Dayton, Ohio. It shows in a straightforward, convincing way, why the Sharples contract is so highly valued and so eagerly sought after by live dealers. Read it carefully.

"We read each issue of the Sharples News with both interest and profit. We were especially impressed with the cartoon on the front page of the last issue, showing why some dealers don't sell Sharples Cream Separators. Of all the things you have in your place of business, the cream separator must have a prominent place, kept clean and free of litter to make it appeal to the farmer's wife. Her impression of its merits will be just in proportion to the estimate of the value the dealer puts on it as evidenced by the place given it in his store and the condition of his sample machine.

"With this letter we are sending an inside picture of our dairy supply house, showing the place we have given our sample Sharples Suction-feed machines. We find that Sharples Separators are best sold by offering the wife of your prospective buyer a chair in front of the Suction-feed Separator and then 'get them to see' what a wonderful machine it is as compared to anything else on earth. At the present time, there is absolutely nothing made that compares with the Sharples Suction-feed Cream Separator.

"To the prospective purchaser of a cream separator, you can say of the Sharples Suction-feed that it is the 'world's wonder in cream separators.' It prevents the waste of cream in the first skimmed milk that comes from the machine and all waste of cream from irregular turning. On present prices of cream and butter, this means a saving of $5 or $10 per cow each year over all other makes of cream separators. Then, think of the many improvements over the old Tubular: Still lower supply can, no feed tube, no feed tube rubber, no drip pan, no nozzle to screw together or screw into bottom of machine and impossible to have a milk slop from choking down. With these new improvements over the old Tubular, we still have the advantage of almost nothing to wash—no discs. Self-oiling, with no bearings down in grit at bottom of gear case. Hanging self-centering bowl, doing away with all too heavy wabbling. No outside gears to catch clothing or children's fingers. And, with all, wonderful durability and easy turning.

"We are just local dairy supply people here at Dayton, but we have sold over 2000 Sharples Separators. Allow us to suggest that the dealer always allow a little for his customer's old cream separator and haul it to the junk pile. This puts the old machine out of existence, prevents some other party using it as a cream separator, makes a place to sell another Suction-feed. We have traded in over fifteen ton of old cream separators on the Suction-feed.

"Give sample machines a prominent place in the store, free of litter and desirable looking. Right now is the time to boost the sale of the Sharples Suction-feed. There is nothing else on the market that customers will care to consider if you 'get them to see' the wonderful advantage of the Sharples Suction-feed Cream Separators. And don't forget to tell your customer that the price on the Sharples is reasonable—only 50 per cent. advance over before-war prices, while all other implements have more than doubled in price. We boost the Sharples line because it is worthy of our effort and the consideration of our customers."

There is only a limited territory still open for Sharples representation—and dealers who hesitate are handicapping themselves. However, only progressive, responsible dealers need apply. Write to nearest branch.

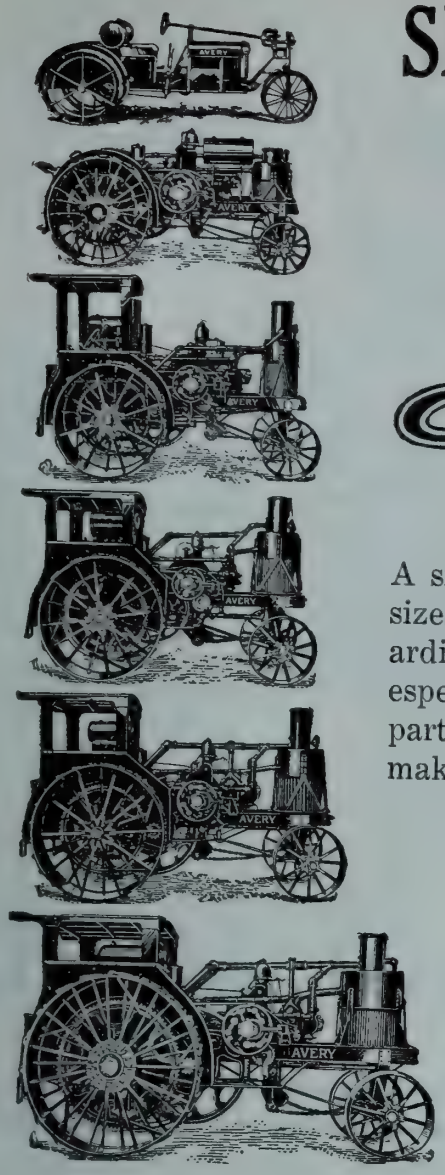
The Sharples Separator Co., TORONTO, ONT. REGINA, SASK.

THE LOUNSBURY CO., Newcastle, N.B.

DISTRIBUTORS THROUGH ALL THEIR BRANCHES

"Over 2,425,000 Sharples Separators in Daily Use"

J. CLARK & SON Fredericton, N.B.



SELL "LISTER" FARM MACHINERY

The Line with a Record for Dependable Service

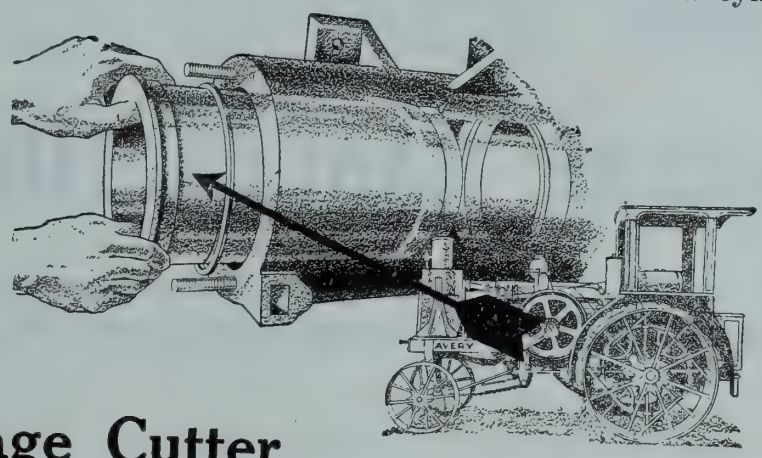
Lister
POWER ON THE FARM

Agents make substantial returns in commission with the minimum of trouble

The Avery Tractor---

A size tractor for every size farm, all sizes from 8-16 H.P. up have a standardized design, with every part built especially for tractor use, and every part so designed that the owner can make his own adjustments and repairs.

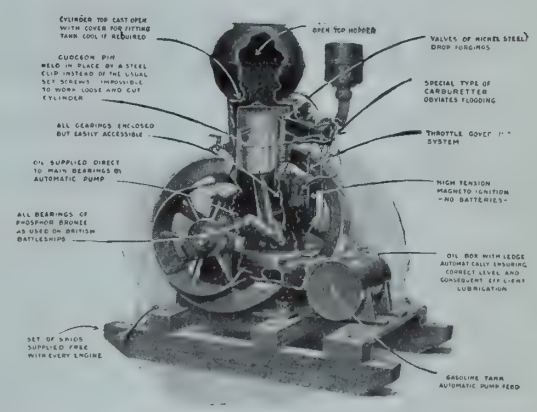
Cylinder Walls are renewable. Just pull out the inner cylinder wall of an Avery tractor when it becomes worn or scored from any cause. A feature which appeals to the discriminating buyer. Damage through wear or accident does not necessitate a new cylinder.



The "Lister" Ensilage Cutter

The "Lister" Ensilage Cutter is extra heavy and of special tensile strength, giving it long life and durability. Has long bearings of **high grade anti-friction metal,** insuring the best possible service in this most important particular.

Durability, plus speed and safety, are the ideas that predominate in the manufacture of "Lister" Ensilage Cutters and Blowers. Like all machinery bearing the name "Lister," these cutters will make good and pay their cost in a short time.


CYLINDER TOP CAST OPEN WITH COVER FOR FITTING TANK COOL IF REQUIRED
OPEN TOP HOPPER
VALVES OF NICKEL STEEL DROP FORGINGS
GUDGEON PIN HELD IN PLACE BY A STEEL CLIP INSTEAD OF THE USUAL SET SCREWS IMPOSSIBLE TO WORK LOOSE AND CUT CYLINDER
SPECIAL TYPE OF CARBURETTER OBVIATES FLOODING
ALL GEARINGS ENCLOSED BUT EASILY ACCESSIBLE
THROTTLE GOVERNING SYSTEM
OIL SUPPLIED DIRECT TO MAIN BEARINGS BY AUTOMATIC PUMP
HIGH TENSION MAGNETO IGNITION "NO BATTERIES"
ALL BEARINGS OF PHOSPHOR BRONZE AS USED ON BRITISH BATTLESHIPS
OIL BOX WITH LEDGE AUTOMATICALLY ENSURING CORRECT LEVEL AND CONSEQUENT EFFICIENT LUBRICATION
SET OF SPARES SUPPLIED FREE WITH EVERY ENGINE
GASOLINE TANK AUTOMATIC PUMP FEED

The "Lister" Engine

British-built, maintaining that reputation for dependable service and wearing qualities which is associated with British manufacture throughout the world.

2, 3, 5, 7 and 9 H.P.—Standard Hopper Cooled, throttle governed automatic lubrication and equipped with high tension magneto. Constructed by special means to meet your special needs. Simple—easy to operate, economical. They do the most for the least money.

Write for full particulars and agency proposition

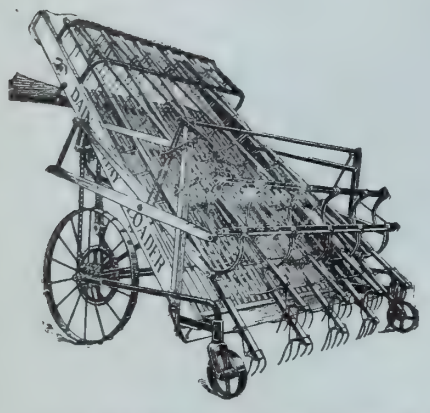
R. A. LISTER & CO. (CANADA) LIMITED

58-60 Stewart Street, TORONTO -:- **Also at Wall Street, WINNIPEG**

—JOHN DEERE-
DAIN
RAKE-BAR
HAY
LOADER—

—The Original
Rake-Bar
Loader—

Commonly
Known as
"The
One-
Man
Hay-Loader."



JOHN DEERE

WELLAND, CANADA.

THE TRADE MARK OF QUALITY
MADE FAMOUS BY GOOD IMPLEMENTS

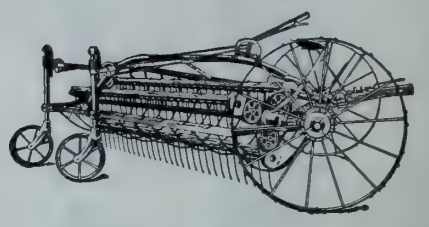
THE DAIN SYSTEM OF MAKING HAY IS NATURE'S WAY

MAKING HAY WITH JOHN DEERE-DAIN HAY TOOLS SAVES LABOR AND INCREASES ITS VALUE FROM $4 TO $8 A TON.

These machines are the result of forty years of study and experience in the making of hay machinery and are warranted to satisfy the most particular farmer. Dealers who handle Dain Hay Tools or any other John Deere machine is assured of easy sales, and he knows that they stay sold. Our Dealers' Service Department is of great benefit in giving your customers the greatest of satisfaction and good service, and our system of advertising is unequalled. If there is not a John Deere dealer in your locality, get in touch with us at once, as we want a real live dealer in every town in Ontario. Drop us a line and we will mail you beautifully illustrated literature on our John Deere lines of "Quality" farm implements, including Hoover Potato Planters and Diggers—Van Brunt Grain and Fertilizer Drills, Corn Cultivators and Planters—Manure Spreaders—Harrows, etc. Let us hear from you.

Give the Farmer
What He Wants.
Increase Your Sales

—Labor-Saving
Machines
Which
Combine
Exclusive
Features—



—John Deere-
Dain
System
Left Hand
Side Delivery
Rake—

—Strong—
—Durable—
—Efficient—

JOHN DEERE MANUFACTURING CO., LIMITED

WELLAND - - - - ONTARIO

THE FINANCIAL POST in the House of Commons

IN the House of Commons the other week the attention of the Government was drawn to the article in THE FINANCIAL POST containing a reference to the financing of Roumanian orders through an agency established in London by Sir Clifford Sifton. Sir Thomas White, who is familiar with THE FINANCIAL POST, stated his opinion that the reference was to the private marketing of bonds.

This is merely a small item from THE POST of recent date, but it goes to show that

POST BUSINESS NEWS HAS THE ATTENTION OF MEN WHO COUNT

SIR THOMAS WHITE, with other prominent Canadian men of affairs, has found THE FINANCIAL POST of swift and sure business service. When you "get down to business" you want the plain facts—all of them—without frills—and quickly. You get them like that in THE POST. THE FINANCIAL POST will keep you informed on Canadian business matters in a way unrivalled by any other publication. Send for a subscription to-day. The price is $3.00 per year, and you have only to fill in this form:

The MacLean Publishing Co.,
143-153 University Ave., Toronto.

Send me THE FINANCIAL POST every week till further ordered. I will pay subscription price, $3.00 per year, on receipt of bill, or you may draw on me for this.

Name.....

Address.....

Who will make the money selling Tractors

WHO made the money in the automobile business? The men who had foresight enough to get in on the ground floor at the start.

Who will make the money selling tractors ? The men who get ready right now, who tie up territory and build organizations that are capable of satisfying the demand for tractors which is fast developing throughout the World.

Farmers everywhere are talking tractors.

County agents and agricultural instructors are talking tractors.

The small town merchants and bankers are talking tractors.

Even the city man is interested.

The road contractor, the builder, the industrial manager——all are ready to adapt the right tractor to their individual needs.

THE dealer who gets a contract now for the *right sort* of a tractor, backed by a live, *permanent* manufacturing organization, will be the man to "cash in" on this tractor enthusiasm.

The Cletrac Tank-Type Tractor is the right sort of tractor——performance has proved it. In three years its production and use have increased twenty-fold. In three years the Cletrac has made good on every variety of job the farmer, the contractor or the factory manager could invent for it.

The Cletrac is a tractor with a record of *salability* as well as performance, and hundreds of dealers are going to make big money selling Cletracs this Summer and Fall.

Will you be in on the ground floor?

A complete treatise on the tractor market and on the board gauge policies of the Cleveland Tractor Company is contained in our new book "Sale Quality in Tractors". Dealers are welcome to it and to the details of the Cletrac contract.

The Cleveland Tractor Company

19125 EUCLID AVENUE - CLEVELAND, OHIO.

Largest Producers of Tank-Type Tractors in the World

Fairbanks Scales Saved This Man Many Dollars

"Do you ever 'weigh in' your goods?" a grocer asks. "You weigh them carefully when selling, but what about checking up the weight on stuff you buy?"

"Let me tell you something from personal experience—" and then he goes on to tell how he got a credit of $10.38 on five barrels of sugar, how he saved $4.20 on a lot walnuts and something else on sal soda.

"If grocers only realized this," he adds, "they would save many dollars in the course of a year."

Tell your customers how they can profit more by "weighing in." Show them how they can save money by checking the goods they buy with Fairbanks Scales — recognized for generations as a standard in weighing. It will mean more sales and more profits for you.

Write us to-day for information about all kinds of Fairbanks Scales.

The Canadian Fairbanks-Morse Co., Ltd.

Halifax, St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria.

CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Volume I | TORONTO, JUNE, 1919 | Number 4

R. M. BRISCO.

Brisco Did $8,000 Worth of Business Last Month—It is only Eight Months Since He Opened Up in London, Ont.

Here's how he did it—some remarks about service, non-reliable goods, price-cutting, hard study, storing accessories, digging up prospects and knowing what you're making *every day*. You can't afford to miss this hustling business story. *This is live stuff.*

"I HAVE heard you are a confirmed price-cutter, Mr. Brisco; is that so?"

"Nonsense; it is mighty little 'price-cutting' that I do. I will venture to say that not 5 per cent. of the business I transact in this store is done at less than list prices, and whenever I go below the list price there is a sound, common-sense business reason for so doing."

"Is it correct that you did more than $15,000 worth of business during the past two months, April and May?"

"Yes, that just about hits it exactly right; during April this little store here did a total business of $7,000, or thereabouts, and during May this mark was exceeded by at least $1,000."

Thus you can readily see that Mr. R. M. Brisco, who opened an automobile accessory business at 258 Dundas Street, London, Ont., last fall, looked like an interesting chap to interview on behalf of the readers of this publication. According to his letterhead, Mr. Brisco handles Hyslop bicycles (wholesale and retail), velocipedes, wagons, motor cycles, sundries, tires, tubes, cement, electric fixtures, oils, greases, chains, batteries, bulbs, flashlights, and a large stock of sporting goods. For six or eight years he was in business with his brother, Ernest Brisco, in Chatham, Ontario, and it was only last fall that he decided to open up in London. When he commenced business here he estimated that if, by May, 1919, he were doing a gross business of $2,000 per month he would be well satisfied with his progress.

But—

Now he is doing $2,000 *per week!*

One of the secrets of Mr. Brisco's success is that he can tell within a few minutes, any time of the month, *exactly* how his business stands, and can estimate with a satisfactory exactitude what his profits have been for the current month, as well as for the current year. How is this made possible?

The system is simplicity itself.

HE has one of the most complete cash registers that it is possible to buy. It has the printing device on the side which sets down every sale on a tape, and this tape is wide enough to allow the man who makes the sale to write after each in which column in the itemized ledger it should go. The itemized ledger is divided into columns, the various columns representing goods sold at 25 per cent., 33 1/3 per cent. and 50 per cent. advance on their cost price, and as each sale is made there is a mark placed after it on the tape by the clerk to designate which column it should be in, by using such letters as "A. S.," meaning "Auto Sundries," etc.

In addition, Mr. Brisco also keeps columns showing goods or invoices coming in very day and goods paid for each day. By this method he can tell in a very short time how his liabilities stand, and is also able to check himself if he is buying too heavily.

"These two columns," says Mr. Brisco, "constitute my business thermometer, and I make it a point to watch this thermometer so that each column keeps the correct ratio to the other. I find this of immense use to me in the financial end of my business, and I have been able to work out no other system as satisfactory as this, which can be handled by a man running a small business who is not warranted in charging the cost of a bookkeeper, accountant, or other expensive system against his overhead.

"How about this accusation of cutting prices?"

"It's this way: I do not believe that the manufacturer in putting a list price on his goods takes always into consideration the various problems which confront the retail man. During the few years that I have been in business I have been able to find no other way to ascertain, from time to time, exactly how I stand financially, unless I decide on a uniform list of advances on which to sell, and stick to these advances absolutely. For example, in the automobile accessory line some of the list prices will allow 30 per cent., 40 per cent., 50 per cent. and even 75 per cent. or 100 per cent. discount.

NOW, if a retail man has to follow these prices, how is it possible to tell—except perhaps once in a year—where his business stands, unless he keeps an office staff larger than his business will warrant? Therefore, in order that I can keep an intelligent watch on my business and know where it stands at any time, and also keep my ledger right, I decided that I would be unable to follow the list prices; so I collect all the nearest in one group of my itemized ledger, in the groups that I have indicated previously, 25 per cent., 33 1/3 per cent., and 50 per cent., and this enables me to keep

All will agree that this is a good-looking window.

my fingers exactly on the cost of the business. I have found it to be an impossible task to try and do what someone else tells you to do as to list prices, and you find by so doing you lose track of the most essential part of your business. I hold that the essential part of every man's business is in his office. Selling the goods—and large quantities of them—may look all right, but when your office is not in proper shape to regulate these sales, it is all a blind man's job. It is very easy for a man to kid himself about his business, and think that he is doing things in a big way, but if your office has the figures, when you come to total this up, to show you that your gross receipts do not mean that you are getting an adequate return on the time, energy, and money that you are investing, well then I say that the kidding is past."

This perhaps is the best place to state that Mr. R. M. Brisco is not at present a member of the London and Middlesex branch of the Automobile and Accessory Dealer Section of the Retail Merchants' Association of Canada. It is an open secret that the officers of the association have found, as one member of the executive expressed it, that "both the Briscos, the one in London and also the one in Chatham, seem to give trouble once in a while; there must be something in the Brisco blood to account for it, perhaps."

R. M. BRISCO was an attendant at two of the meetings of the London and Middlesex branch, and gives this as one of his chief reasons for withdrawing—or withholding—his support from the organization that he found the members were just as prone to cut prices as he was—if they could get away with it. As to the fact of this disagreement and difference in views we—having no axe to grind—claim the privilege of the exemption of neutrality.

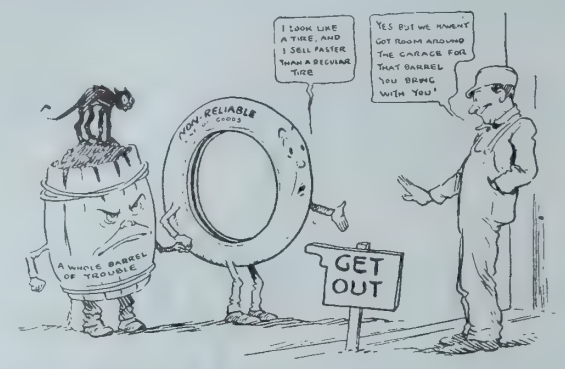
But to return to the main thread of the story. Mr. Brisco continues:

"Just to give an example of some of the difficulties that arise in the question of price-cutting. There is a well-known spark plug listed at 90c; it comes to us in a box which has '75c' printed on the outside; it sells just across the border in Detroit for 48c, according to advertisements in Detroit papers, which are occasionally circulated here; and it has normally sold in the past in the locality around London for $1.00. What do you think of that? I sell this plug at the list price of 90c, although it is often necessary to do quite a lot of explaining when I hand this to a man and he observes that 75c is marked on the outside of the box. Of course, that is meant to be the selling price in the United States, but the manufacturers do not take that into consideration when sending this across to Canadian distributors and dealers.

"HERE is another example where I do not feel myself justified in sticking to list prices; I have a great many friends among the manufacturers and their travelers, and they make me *special* quotations now and then, or put me in the way of getting a specially good price on a large consignment. I cannot see that there is any reason why I should not take advantage of this and if anyone is to blame it is the manufacturers.

"And another example: There are often times when I can get a job lot of tires, or some other commodity, perhaps the result of a bankrupt sale, at special reduced prices. If I do this, no matter how cheaply I may buy tires or whatever else there may be, I give my customers the benefit of the bargain, too, and simply place on my cost price the specified advance which I make on all tires that I handle.

"There are some lines where one is able to make, say, 100 per cent. profit, but this does not mean sound business to me and so I stick to my original idea, but, all these things that I have mentioned are exceptional, and taking everything into consideration there is less than five per cent. of my total volume of business where I cut prices. And I assert that there is hardly


I LOOK LIKE A TIRE, AND I SELL FASTER THAN A REGULAR TIRE
YES BUT WE HAVEN'T GOT ROOM AROUND THE GARAGE FOR THAT BARREL YOU BRING WITH YOU!
NON-RELIABLE GOODS
A WHOLE BARREL OF TROUBLE
GET OUT

a man in this city who does not, at some time or other, cut prices below the list, even if it is only to extend a favor to a personal friend."

(Apropos of this remark of Mr. Brisco's, it may be mentioned that we talked to a London business man who told us that within the past few days he had bought certain articles from a member of the *Executive* of the local dealers' organization at considerably *below* the list price).

HOW best to store automobile and other accessories is a great problem for practically every dealer who handles a large number of different lines. There are so many articles which cannot be kept properly on shelves, and there are draw-backs to placing them in bins or boxes, or even drawers. The time has passed, we hope, when the customer will go into an accessory store and ask for a certain article, and the dealer would have to locate this article by scrambling through a heap of what looks like junk behind his counter, or at the back of the store.

We were in one store in Eastern Ontario this spring—before stock taking—and all the accessories, tires, oil cans, and other odds and ends of equipment were piled in a heap at the back of the store behind some barrels. It took two girls and the proprietor more than a fortnight to get everything straightened around again after the laxity which had been permitted during the winter months.

In the Brisco store so many accessories are handled that Mr. Brisco had to work out a satisfactory method of handling, and storing them. He has a fixture of bins, large at the bottom, with a shelf about counter high and about 8 in. wide, to show the goods on. Above are smaller bins. Along the front of the bin runs a board strip about 3 in. wide, leaving ⅛ in. at the bottom to allow the bin to be dusted out. This strip is sufficient to hold the various items in the bin. On the outside of this strip, in front of each bin, is pasted a picture of the article that is in the bin. The price of this article is also on the paper showing the picture. This is found to be not only a good way to keep the stock handy, to check up the stock, but it is also the best kind of a silent salesman, as customers can see not only what you have in stock but also see what your prices are.

A number of dealers have decided that it is best to keep their smaller accessories in drawers, but practical experience has shown this objection, that often a drawer may be taken out and put back in the wrong place, when several are out at the same time, and the drawers are all the same size. This leads to subsequent confusion in locating stock.

A well-ordered glass-fronted silent salesman also takes a prominent place in the Brisco store and is exceptionally neat and attractive looking.

SERVICE plays a large part in the building up of the Brisco business. Mr. Brisco says that after you get a reputation for giving sound and reliable service to your customers, your success is assured. He handles only goods that he has found out by experience will give satisfaction to his customers, and this fact is frequently used as an advertisement. One advertisement which he has used frequently with great success is the following:

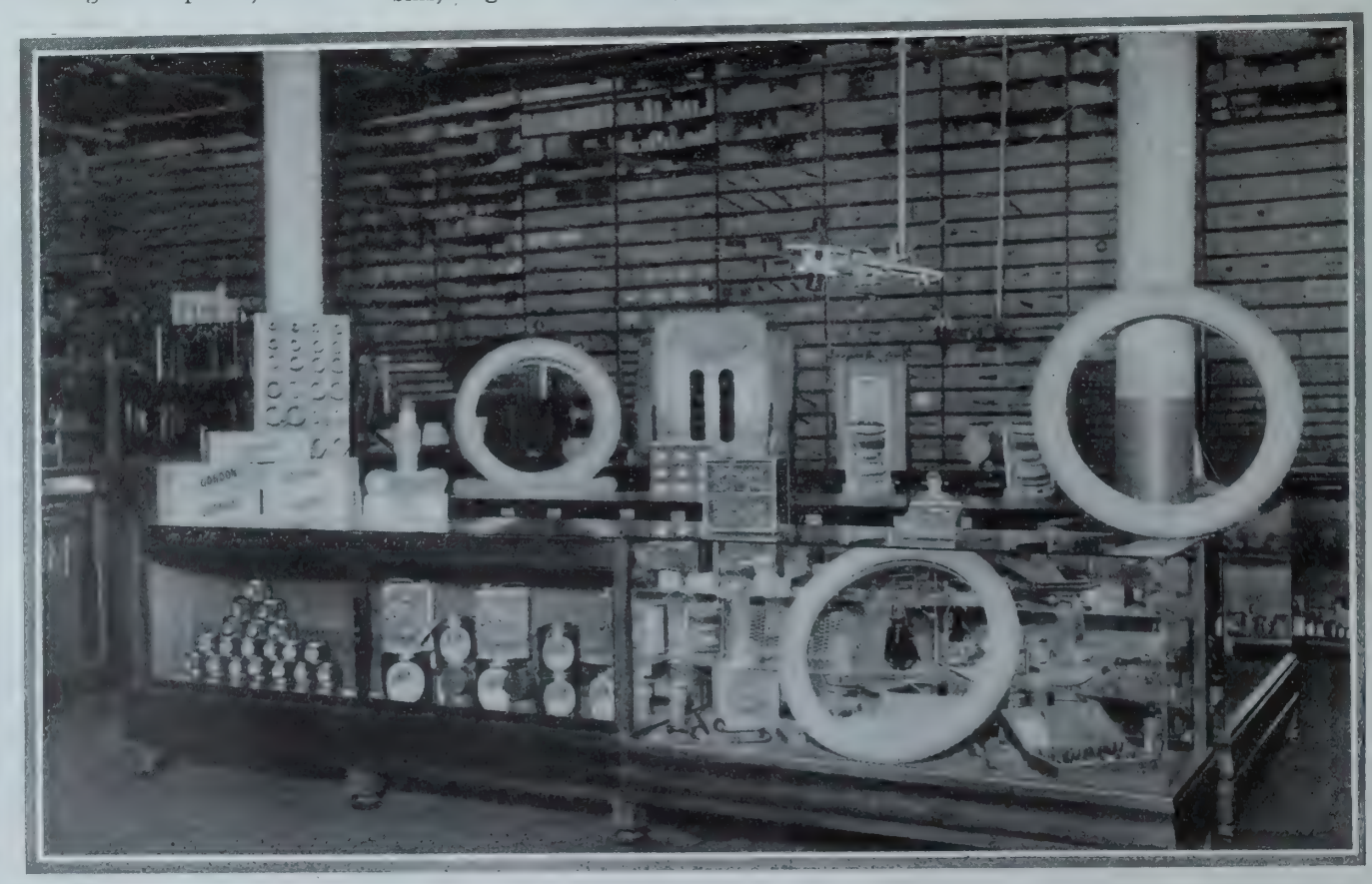
"We are bankers as well as merchants. Every dollar left with us is in exchange for goods. It is on deposit at your credit until the article gives an honest dollar's wear."

Non-reliable goods are the biggest enemy in one's business, says Mr. Brisco, who tells how he came to "cut out" all lines except those he can back with his own guarantee:

"My first season I tried keeping goods to suit all customers: that is, goods for the man who wanted reliable and guaranteed articles; also for the man who wanted the cheap, inferior article. All through this season I had considerable trouble and I found practically all came from the purchasers of the cheap articles, and a little dispute during the last of the season settled in my mind what I had been studying for some weeks—that was, to discontinue the non-reliable lines of goods.

"A customer of mine who had purchased a lot from me during the season, came in for a tire. I knew he liked a good article and did my best to sell him a good tire, but as luck would have it, a 'second' stood next to the tire I was trying to sell, and he naturally looked at the price on it. As it was a large tire, the difference in price was considerable, also the price was considerable (to be lost by him, as it was) and he made the remark 'it was only for a front wheel.' I could not talk him out of the 'second.' Well, he ran only about fifty miles on that 'second' when he was back with a blow-out. I tried to explain how the tire was not guaranteed; I tried every way to convince him that the fault was his, but could not, and on going out he stopped and talked to the clerk. After he had gone the clerk said, 'Mr. Brown says that you should not have sold him that "second." And there it is! he blamed me for selling! So much in common with individuals—blame the other fellow.

"THIS started me thinking. There was Mr. Brown dissatisfied! How much damage would his talking do? And how much would



One of the best displays for tires and other accessories is shown in the above silent selsemen. Note that the shelves behind would be more useful if a proof, or photo, of each article contained were pasted on the outside of the corresponding compartment.

I have to spend in advertising to offset it? I became puzzled. I could not decide to my own satisfaction if it would take one dollar or one hundred dollars, but I did decide that next spring out go all cheap goods. I would stock goods I could guarantee—goods made by good, reliable manufacturers.

"We are careful now when a customer comes in to find out if he has been in the habit of using cheap articles, or if he has ever tried it (and we find most people have some time or other). We find out if it was a cheap tire, or oil, etc., the trouble he probably had, and we immediately attack on the question of doing away with these troubles. Many, this way, are convinced that the best is the cheapest, and we try always to convince that it takes the best always to get dollar for dollar. If a salesman will watch the above when a customer comes in, he will make many good easy sales.

"I put in the next season selling goods we could guarantee, goods made by quantity and quality manufacturing, to such an extent that if by chance the article failed us, the make would not.

"During this same season I started studying every article of any importance; also started my clerks on the same. We studied how articles were made, what of, difference in materials, in fact, every book, leaflet, bit of advertising that we could pick up. We looked for new points. We try to keep up this way so that we can answer any question a customer asks, and then go on and tell him much of interest regarding the article, from the time it was 'in the raw' up to the time we had it before us. I find that a big help in selling as most people have but a slight idea of the article they are buying. Generally enough we know our business, and what we are talking about. I don't allow my clerks to lie to make a sale, as a lie is generally found out some time, and away goes a customer's confidence.

"I notice every day profits of selling a good article. For example, in August, 1916, dealers had started a war on gasoline and kept cutting until it was sold in every city station but mine (in Chatham) at cost. I stuck to a good trade and 4c profit per gallon, and good measure. During the months of war I increased my gas business and had a profit, while we got stories of other stations mixing coal oil, skimping measures, etc. I regretted, for my own benefit, that it did not take longer, but it took only two months for my opposition to find they were sorry and get back to proper prices; but it will take some many months to get back their dissatisfied customers, as I find the buying public is very suspicious of the merchant who is dishonest, and it does not take much to convince them that such and such a merchant is short on measure, etc.

"I FIND now these pleasing results—a cheery greeting when a customer comes in and the satisfaction to yourself to have the confidence of the public. You are not afraid to meet all customers as you know there will be no arguments to floor you. The quickest sales are thus made.

"A traveler stood only a week ago in the store while we made three very quick bicycle sales. His comment was: 'How is it you can sell goods quicker than any store I was ever in? You are not cutting prices and I know you are making a success.' Well, I think you realize why. Some things I believe in: Keeping good clerks and paying what they are worth (poor ones are a detriment); keeping your office so you have everything in detail, both for your own benefit and your customers; slight no one, honor no one—use all the same; don't buy too heavily, but keep your stock complete in every detail."

"Every article," continued Mr. Brisco, "that goes out of our store is guaranteed to give the service it was meant to, or we will see that our customer is made an adjustment. This makes it easy selling as soon as the public understands that we are behind our goods. One thing that all retail merchants ought to do is to get the word 'guarantee' back to its own again. I don't know any word that has been more abused than this. It is a word that really represents so much, and yet so many merchants use it as a selling factor only, and so abuse it that it has become actually an insult to the buying public."

Some interesting examples of the confidence which the Chatham public had in him when he was in business there were given by Mr. Brisco. He said that it was a common occurrence for some one of his customers to call up and simply ask that he send them around a tire, or two tires, or a spark plug, or even a bicycle, and make no further inquiry about it, or stipulate what make or what price it was to be. So sure had they become by previous experience that they would get value for their money, that they reposed this implicit confidence in him.

IN the selling of automobile accessories there is considerable "seasonal" business, and by talking up and pushing certain articles at the right time a considerable increase in business will result. We asked Mr. Brisco if it were not the case, and he replied that he watched this phase of his business very carefully. He said:

"During February and March I always find that a good business is done in selling repair parts and tools; toward the last of March and early in April paint, brushes, enamels, and polishes, etc., sell well; then come tires, tire accessories, spark plugs, general running accessories for the car. Sale of these items keeps up strong until July, and has been very brisk this year. I know that by early in July the great rush of this business will be past, and then we will have a general sprinkling of all lines on and about an even basis throughout the remainder of the motoring season."

Mr. Brisco was asked about his stocking of accessories and how much attention he paid to new accessories which are placed on the market. There are a number of dealers who feel that they must stick to the old standard accessories and are afraid to experiment with any new lines. This may be a sound, but is too conservative a policy, as there are large numbers of new accessories placed on the market every month and a considerable portion of these will sell well, and even if the sale of each individual item is very small it may be a "lead" to larger sales to the same prospects.

No man who comes into your store, Mr. Brisco says, and wants only a spark plug or a radiator cement should be allowed to go out until he has purchased a number of other things, as it is almost invariably the case that he needs more than he actually came in for. It is the business of a good salesman to see that he is induced to buy as extensively as his case warrants. It does not ever pay to stock up a man with more than he can justifiably afford, or with things that are useless to him, for that is not the way to make customers who will stick to you.

One good wrinkle which is adopted by Mr. Brisco for finding out the value of new accessories placed on the market is worth hanging on. He keeps a close eye on the automobiles in London, and vicinity, and whenever he sees one which has a new "gadget" he makes a memorandum of the number of the car, and calls up the owner and asks him what he thinks of this new accessory. If the owner is enthusiastic about this addition to his car, whatever it may be, Mr. Brisco stocks up in this line.

There's a Nice Profit in These

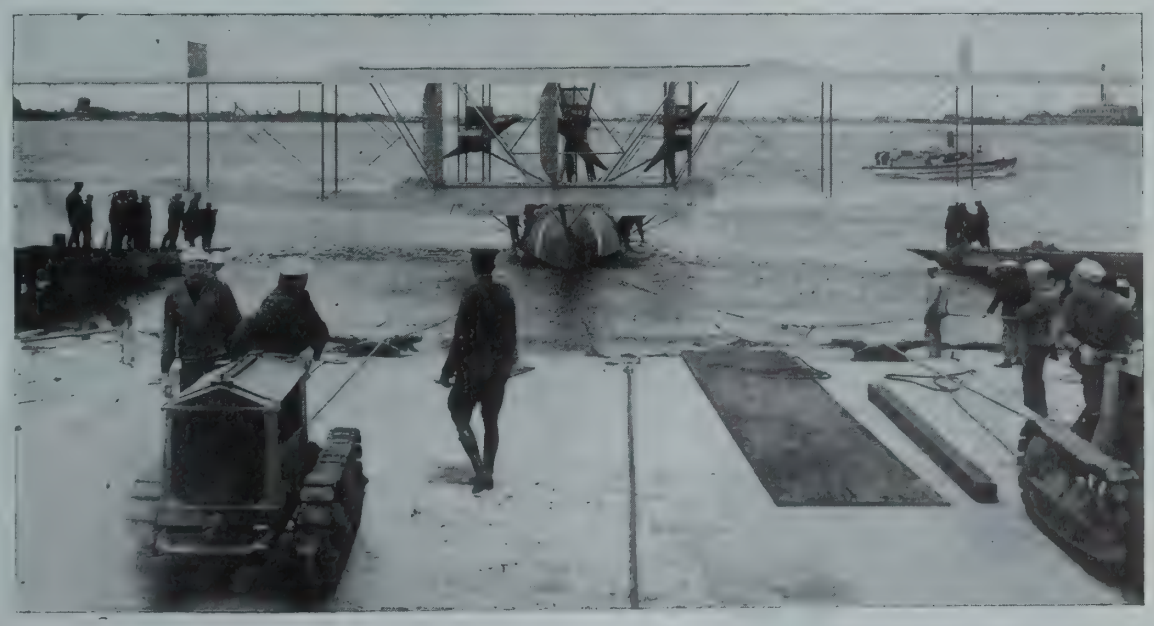
THIS stock of automotive equipment, Mr. Brisco says, is a good foundation to start on. It will cost $450 to $475; it will sell for about $700.

Article and Quantity.

1 electric tail lamp for tire carrier.
Assortment of electric lamp bulbs.
6 battery hydrometers.
Supply of magneto and coil parts.
6 license brackets.
3 tool boxes.
1 jack.
2 jacks.
1 foot pump.
2 foot pumps.
25 ft. 3-16 in. cloth covered pump hose.
12 tubes of patching cement.
12 cans gasoline patches.
12 inside blowout patches, assorted sizes.
12 cans tire talc powder.
100 tire valve cores.
12 valve tools.
12 ¼-lb. rolls of ¾-in. tape.
2 small gasoline vulcanizers.
18 pairs of skid chains, assorted sizes.
6 pairs goggles, assorted.
2 hand horns.
50 assorted spark plugs.
50 ft. magneto cable.
50 ft. primary cable.
100 ft. lamp wire.
12 lamp connectors, plugs and sockets.
3 switches.
25 assorted fuses.
25 assorted spring clips.
100-lb. bale of waste.
9 pieces radiator hose, assorted sizes.
24 hose clamps, assorted sizes.
5 lb. brake-band rivet.
Brake band lining, assorted sizes.
Copper-asbestos gaskets, assorted.
12 grease cups.
6 grease guns.
1 bbl. lubricating oil.
10 1-gal. cans lubricating oil.
6 5-lb. cans grease.
6 pints body polish.
6 pints metal polish.
3 pints neatsfoot oil.
1 doz. cans radiator compound for leaks.
24 pairs pliers.
12 tire pressure gauges.
12 adjustable wrenches.
12 assorted screwdrivers.
Spring washers, machine screws, nuts, cotter pins, taper pins, etc.
2 fire extinguishers.
2 spot lights.
4 runningboard mats.
6 windshield cleaners.
12 cans carbon remover.
12 cans hand soap.

TRACTORS HELPED SEAPLANE

ODDLY enough, tractors played a rather conspicuous part in the trans-Atlantic flight of the American Navy's three seaplanes. They were used at the seaplane base, Rockaway Station, L. I., to pull the heavy planes out of the water, following each daily manœuver. Two Cletracs, made by the Cleveland Tractor Co., Cleveland, O., had this distinction. In the picture the famous Navy-Curtiss Plane NC1 is shown being hauled ashore by the pair of 12-20 "Tank-Type" tractors. This photograph was taken just after the last test flight of the NC1, which made the trip without mishap to Trepassey Bay, Newfoundland, and almost reached the Azores. This plane is an exact counterpart of the other two that made the trans-Atlantic attempt. Followers of the flight will recall that this was the plane that was forced to descend a few miles off Corvo Head, a promontory on one of the islands of the Azores group. The water was exceedingly rough and the plane was badly battered by the waves. The crew, in command of Lieutenant Commander Bellinger, were taken aboard the cruiser Columbia, and at least have the satisfaction of having almost completed the longest leg of the great trip.



Tractor Hauling the Navy-Curtiss Plane NC 1. Copyright Underwood & Underwood.

Rosenheim Visits Auto Show, and Explains *"How It Happened"*

Pinched (With Permission) From "Timken Magazine." Sketches by CLYDE E. DARR.

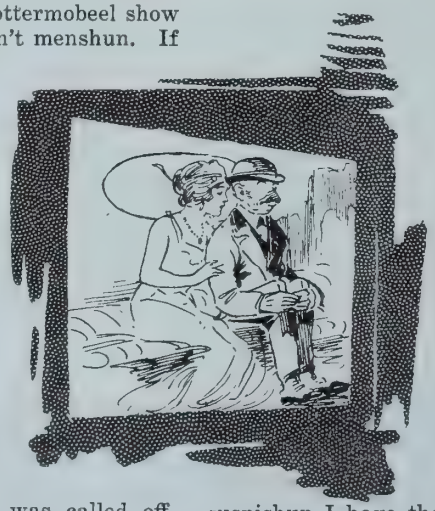
"It is a shame the high-class goods what is going at a sacrifice. I think I take me a train for New York."

"RACHEL," said Max Rosenheim, proprietor of the Scotch Woolen Mills, High-Grade Men's and Boys' Clothing, as he leaned thoughtfully back from the breakfast table, "yesterday I get me a letter from Sam Goldberg in New York and he tells it to me that it's a shame the high-class goods what is going at a sacrifice already, and if I was right there on the ground such bargains I could get as never before. So I think I take me the train for New York."

"So," replied Rachel, with a rising inflection of the voice as she glanced sharply and suspiciously at her husband, "already I understand you have given it the spring order to Eisenfeld Brothers & Schniemann of Chicago. Is it you are going to have such a rush of business that you rent you an annix or what?"

"No, that Chicago order is all off, understand; it was subject to cansellashun if Germany quits like a dog, understand, and already I wire 'em to that effeck. I think now I look 'em over in New York."

"Trips to New York for business is all right, Max, but I remember yet how you went to Chicago last year to buy goods and fell in with that lowlifer Isadore Stein and put in all your time at the ottermobeel show and mebbe other places what you didn't menshun. If this is just an excuse to look at the New York show, say so like an honest man, and me and Abie and Rebecca will go along with you."



"Honest, Rachel, nothing would more pleasure give me than to take you and the children along, but I would be too busy to give you any enjoyment. All day long while I am there I would have to be looking over the styles and beatin' the robbers down on their prices, and at night I would be dog tired, understand, and needin' my sleep. Besides, this here Spanish inflooenzy makes it dangersome in New York, espeshully for wimmen and childern. And there aint going to be any ottermobeel show this year. It was called off, understand, so I couldn't go if I wanted to, which I don't. No, Rachel, this is a strickly business trip, and I prob'ly won't even go to the theayter."

"ALL right, Max, I don't want to make a business trip harder for you, but you stay away from that Herman Klein, what I don't like at all, and remember you aint interested in any of the lines of goods carried by the houses around Broadway and Forty-Second Street. You aint got any call to be above Fourteenth Street all the time you are in New York."

"All right, Rachel, I remember," said Max hurriedly as he prepared to leave for the store, "strickly business; no ottermobeel show, which aint anyway; no Herman Klein, although Herman is a good feller, and no business north of Union Square. Get it my things ready and I take that late train to-night."

When Max Rosenheim arrived at the Grand Central Station he immediately entered the down-town subway and by nine o'clock he was inspecting the offerings of Men's and Boys' Clothing. Salesmanagers, eager for his order, tried to lure him with the lights of Broadway, with invitations for him to write his own ticket in the way of entertainment, but Rosenheim wasn't to be switched from his errand. He had come to New York to buy goods, and he inspected all the stocks, making the purchases that looked good to him in the price and quality. At last he completed his business to his entire satisfaction, and for the first time since his arrival in New York he crossed the dead line of Fourteenth Street by taking a Broadway car bound northward. He left the car at Forty-Second, intending to walk east to the Grand Central Station. At Fifth Avenue, while waiting for the traffic officer's signal that would stop the northbound rush of motor cars long enough for pedestrians to safely cross the street, he felt a hand clap him on his shoulder and he turned, wondering who it could be. It was his old friend Herman Klein——

"Me I got no time for any pleasure this trip. Business it is."

"MY, my, Mommer, such a fine line of goods what I was able to get being right there with the cash money," said Rosenheim to his wife as he showed her the invoices and made calculations on the season's profits which at most conservative figures gave a net return that would make 1919 a year long to be remembered. "Already I guess it is safe for you to get measured for a few furs, if you want 'em, and I notice that Mayor & Kaufmann are showin' a fine line of diamonds."

"Max, it looks like you make it a profitable trip, but right away when you talk about them furs and diamonds a suspishun I have that mebbe you carry a guilty conshuns. If we get a new car this year that will be enough sellerbration."

"Rachel, talking about a new car, in New York I saw—" and Rosenheim stopped suddenly.

"Well," inquired his wife, "what was it you saw in New York that you haven't told?"

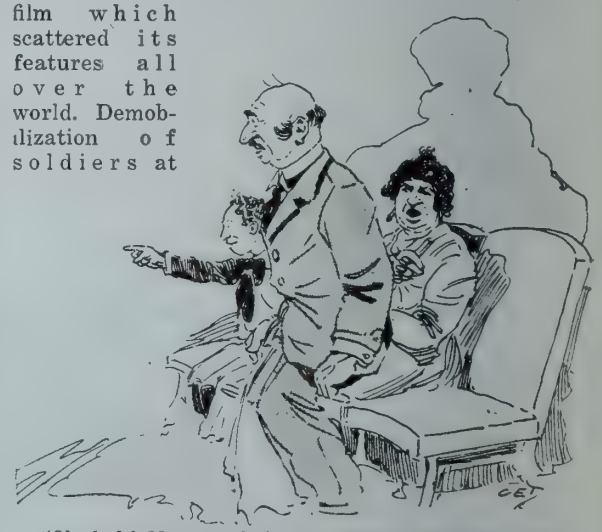
"Nothing," said Rosenheim; "I guess mebbe you wouldn't be interested and anyway I aint got any time now," and he hurried away, leaving Mrs. Rosenheim in a thoughtful mood with wrinkling brow.

For a week the Scotch Woolen Mills Emporium was a busy place, making room for the new spring stock, and Rosenheim arrived home late every night, tired, but happy.

One afternoon Mrs. Rosenheim called up on the phone and said: "Max, it is working yourself to death you are, which there aint any sense in at all. To-night, you understand, you come home early and you and I and Abie and Rebecca we go to the movies. A little reckeration you need after all this work."

Abie and Rebecca shrieked with laughter at the slap-stick comedy shown on the screen; Mrs. Rosenheim breathed heavily as she followed the vicissitudes of the hero and heroine through three reels of complications and tense situations, and Max looked on with the bored air of the tired business man. Then followed the announcement of a reel of current events, a news film which scattered its features all over the world. Demobilization of soldiers at Camp Custer; a fire in Seattle, Washington; Winter Racing at New Orleans, and then a title that made Rosenheim sit up:

"The houses around 42nd and Broadway don't carry your line."



"Oh, look! Mommer, it is Pop gettin' hugged by a goil."

1919 *New York Automobile Show*

"Rachel," he whispered, "it's a bum show, don't you think, and we oughtn't to keep the children up so late. Come on, we go home now."

"You sit still, Max Rosenheim. I have my suspishuns about this heer ottermobeel show what wasn't going to happen. I bet you was there."

THE screen now showed the 1919 line of motor cars exhibited, with sightseers throng-

ing the aisles, and, as the scene shifted in panorama style, Abie's shrill voice yelled: "Mommer, look, there's Pop."

"Max Rosenheim," gasped Rachel, "and that no-good feller, Herman Klein," and, grasping Rosenheim by the arm in a grip that hurt, she hissed: "Max Rosenheim, *who is that woman?*"

Larger than life, and so clear that a claim of mistaken identity was impossible, walked Max Rosenheim and on his arm was a very beautiful woman, with blonde hair piled high upon her head. Max was smiling and talking earnestly. They stopped before a magnificent motor car and the woman climbed in, motioning Rosenheim to sit by her. Then, as he settled back comfortably, she placed both arms around his neck and laid her cheek lovingly against his face; waving her hand to the imaginary chauffeur, the audience could read her lips as she said: "Home, James."

Mrs. Rosenheim grabbed a child by each arm and struggled into the aisle, with Rosenheim following after, his mouth working spasmodically, but no sound coming forth. At the theatre entrance he sputtered: "Rachel, Rachel, it aint so; I can make the explanations; listen to me, Rachel; what you see aint what you think it is, Rachel"—but Mrs. Rosenheim was already aboard a street car.

TRACTOR IMPORTS

Tractors are still coming into Canada at the average rate of more than 1,000 a month. Since February, 1918, 16,599 tractors, valued at more than $14,000,000, have been imported from the U.S. During April, 1919, 1,009 tractors, valued at $897,761 were sent into Canada by the States.

"WELL, all I can say, Max, is that if you can explain that pitcher what I saw last night, then you are some little explainer, believe me," said Max's friend, Meyer Goldman, to Rosenheim in the latter's office.

"Meyer, I tell you how it happened. It is all the fault of that damn joker, Herman Klein. Now I bet I lose me all the profits on my spring sales because right away I got to go to New York and bring Herman Klein and his nephew here before Rachel she starts it a suit for divorce. She won't even talk to me over the telephone. I tell you how it was. Just as I was starting for home, I meet up with Herman and he wouldn't hear of nothin' else but I must stay over and have a visit with him.

"I go to his house and he introduces me to his nephew what is a play akter feller. This play akter is one of them female impersernaters, and he does it good. Believe me I laff my head off when he fixes up at home and gives a performance in the parlor. He sings and dances just like a girl, and I didn't even then believe it was him till at the finish he jerks off that yeller mop of hair.

"Well, Herman he proposes that we go down to the ottermobeel show and that Ikey go along and fool the crowd same as he did me. Like a fool I didn't stay away from Broadway and Forty-Second Street as I promise Rachel; like a fool I didn't run when I see Herman Klein; and like a fool I go to the ottermobeel show after tellin' Rachel there wasn't goin' to be any. So we go down to the show and Ikey he has to do some of his play acktin', and that is how it happened."

"Well, Max, I tell you what I do. I'll go over and talk with Rachel, and, if I get a chance to say a word, I'll tell her what you say, but if Herman's nephew Ikey should have happened to have dropped dead since you left New York, Max, I don't believe you are a good enough explanationer to square yourself."

Tire Prices Slashed!

TIRE prices, which were slashed an average of 15% in the United States three weeks ago, have been similarly reduced in Canada. When we went to press, five of the leading firms had announced a substantial cut in price—Gooderich, Dominion, Gutta Percha, Goodyear and Dunlop. Partridge states that they expect to make no reduction in the near future, and Michelin tire says "for the moment this will not affect our Canadian prices."

A. MacQuerrie, of the B. F. Gooderich Co., of Canada, Ltd., announced new prices effective May 12. The other reductions took effect June 2. In explanation of the slash, Mr. McQuarrie says:

"This liberal reduction is the first to take effect since the United States became involved in the world war.

"The lowering of the cost of rubber tires is not due to any apathy in tire buying, because we find the demand for our products well in excess of the supply. Three factors entered into the tire price revision. First, the remarkable industrial efficiency in the rubber industry allowed it to change over quickly from a war footing to a peace basis and tire production to-day is nearing a mark greater than at any time previous to the world war. Second, all war restrictions on the importation of crude rubber have been removed, enabling manufacturers to keep ample supplies on hand. Third, considerable progress was made in factory efficiency because of the strenuous pace demanded by the army and navy programs in the prosecution of the war, when solid and pneumatic tires, tubes, gas masks, dirigible and observation balloons, were turned out in tremendous quantities.

Comparing users' prices in the Gooderich lines it is seen that reductions of as much as 21% have bben made. For example, the fabric tire, smooth, 37 x 5, which cost before May 12, $80, is now $70. The 30 x 3 smooth, as an instance of the usual size, drops from $22 to $18.90.

The F. E. Partridge Rubber Co., Ltd., Guelph, Ont., says:

"The prices of pneumatic automobile tires in the United States have been reduced approximately 15%. We do not, however, anticipate a reduction in price in Canada in the near future. Our reason for making this statement is that tires were increased on two occasions in the U. S.—at one time with an increase of 10% and another 15%, when similar increases did not follow in Canada, so that while the American manufacturer might be justified in reducing his prices at this time, the Canadian manufacturer is not.

"Previous to the war, tires sold in the U. S. for about 25% less than in Canada. Latterly, however, they have been just about as expensive over there as here."

Reduced prices are announced, effective June 2, by the Dominion Rubber System, which says:

"The demand for Dominion Tires has resulted in a corresponding increase in production; and this increased production in turn has resulted in Dominion Tires being manufactured at a lower cost per tire.

"This saving in manufacturing cost will now be shared with all motorists."

The Gutta Percha and Rubber Co. state:

"Our prices are reduced effective June 2, 1919, on our Covers and Tubes. This represents a reduction of approximately 7½% on Plain Tread and Ribbed Tread Covers, and in the majority of instances considerably more than 15% reduction on the Non-Skid Covers. The prices of Tubes have also been reduced considerably."

The Michelin Tire Co., of Canada, Ltd., write:

"Re reduction on tires in U. S.; for the moment, owing to certain special conditions prevailing, this will not affect our Canadian prices."

The Goodyear Tire and Rubber Co. reduction also took effect June 2, the cuts being about the same percentage as the Gooderich.

The Dunlop Tire and Rubber Goods Co. announce substantial reductions in their prices for automobile tires. The improvement in conditions for ocean traffic and the release of vessels for freight-carrying is mainly responsible for this readjustment. The reductions also apply to the Dunlop "cord" tires, which, after exhaustive experimentation, were announced to the public several months ago.

Van der Linde Rubber Co., Ltd., Toronto, have announced an all round reduction of about 7½ per cent.

United Rubber Co., Toronto, report that they have made a cut of about 12½ per cent. in their prices.

Royal Oak Tire Co., Oakville and Toronto, state they will increase their quality and guarantee, and contemplate no reduction in price.

Marathon Tires, St. Catherines, have not announced any reduction yet.

Western Implement Problems

Regina, Sask.—During the convention of the Retail Merchants' Association held here during May, a committee representing the Retail Implement Dealers' section met the managers of the wholesale branch houses, and discussed several vital questions. The companies represented included: I. H. C., Massey-Harris, John Deere, Cockshutt, and Tudhope-Anderson. The following matters were taken up and very fully discussed:

1.—The average retail sales costs covering the sale of small implements.

2.—The margin over the absolute cost of selling that should be allowed to a dealer.

3.—The time limit allowed for the charging back to an agent of notes unacceptable to the company.

4.—The matter of a general increase in the allowance on repair sales.

5.—The matter of a general increase in margins on sale of all small implements.

These various subjects came up for very full friendly discussion. The matter of the margin on the sale of farm implements was the burning question. It was conclusively shown that these were ridiculously low. Margins of from four to eight per cent. were common. It was contended by the retail men that this was hurting their own business, driving the better business men out of the trade entirely.

With Our Readers

We're always pleased to get interesting, pithy letters—especially those with ideas. Extracts from a few will be published from time to time.

IS ACT WORKABLE?

Editor, M. T. I.—I have been reading the copy of the Manitoba Implement Act, which appeared in your May issue, and I would like to state that it appears to me too one-sided. In fact, I do not think it can be made workable, but time will tell.—R. Armitage, Hamilton (Massey-Harris blockman.)

WILL IT DO THIS?

Editor, M. T. I.—There are many things I admire in the Manitoba Act. . . . I think it will have the effect of causing some dishonest fellows to square away and protect purchasers who are easily influenced.—G. H. Horning, Ancaster, Ont.

BOUQUETS—ABREVIATED

Editor, M. T. I.—I think your new paper is a fine one; keep up the good work. . . . I operate a garage, and handle tractors, implements and accessories. I will look forward now to your New Equipment Section, as it keeps me up-to-date.—J. E. White, Orion, Alta.

Editor, M. T. I.—I think your journal is a good one but it does not hit our Western problems like I have no doubt it will later. . . . I handle tractors and implements. . I wish you'd tell us how to make the manufacturers play fair with us.—Geo. W. Mathewson, Craik, Sask.

(*Editor's Note*: Your surmise is correct, Mr. Mathewson; watch our late summer and fall numbers, and you'll see how our Western articles will increase in numbers. We expect to be out to see you in a few weeks, if this —— Winnipeg strike settles down.)

Editor, M. T. I.—I think your paper is a splendid one. I am very much interested in the New Equipment Section, as I like to look over all new accessories, and add to my stock, whatever I regard as good. I wish you people would get after the oil companies which peddle around to the farmers. The worst offender is the ——— Oil Co., ——— I cannot say too much for your paper.—Geo. A. Purcell, Athens, Ont.

AND A BRICK-BAT!

Editor, M. T. I.—What do I think of your paper? Pretty poor yet, but could be improved by more practical shop information. But your magazine is not too bad as a starter.—A. M. Glover, Goderich, Ont.

Editor's Note: Mr. Glover sends along a several page letter, brim-full of constructive criticism. This is the kind we like to get. Shop information is one way in which we're going to grow, Mr. Glover. We are going to refer at greater length to your letter in a later issue. Remember, too, we're just four months old with this issue—but we're a husky youngster!)

CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

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DON'T FORGET THE PLOW

MOST of the agricultural cultivative operations are done with some form of the plow; without the plow there could be no agriculture; this is a fact well worth pondering by the dealer, for he is sometimes too liable to forget what is really the backbone of the farm equipment business.

The plow instantly suggests the fundamentals of farming. What are the fundamentals of farming? Most of them are covered by the one word—cultivation, intelligent and persistent cultivation, or, in other words, work carefully directed by the farmer.

But, the dealer can help his business a lot by concentrating his thoughts on the plow and remembering that he, too, figuratively, can take this lesson of intensive cultivation to heart. To plow means to get ahead; to cultivate intensively means progress; every dealer should see that his list of prospects is *cultivated intensively.*

This means progress—and dollars.

PUBLICITY FOR DELIVERIES

When you make a delivery of a tractor anywhere in your territory, Mr. Dealer, what kind of publicity do you arrange for? Do you simply deliver the tractor to your customer, discuss some of the points of operation and adjustment with him, and then leave it at that? If you do, *you're all wrong.*

What you should do is to telephone to all the farmers in the neighborhood of your customer—or drop them a line—and extend them a personal invitation to attend the delivery. Set a convenient hour for making the delivery, and then see that you have the tractor there at the time specified. In this way it will prove mighty good business for you, and you may attract a crowd of twenty to fifty farmers, and their boys and workers, many of whom will doubtless be prospects. Every man who does not own a tractor, whether he is thinking of buying one or not, will be interested in seeing you start the tractor which you have just delivered.

THE CLOSE-UP PROSPECT

Norval Hawkins, sales manager of the Ford Company, Detroit, tells an interesting story of interest to all automobile salesmen. It is said that green and distant fields are notoriously super-attractive, and Mr. Hawkins relates how he was overlooked as a prospect. He says he was selling more than a million dollars a day in Fords, and he was a prospect for a high-grade car. He continues the story this way:

"I had bought cars for myself, and an electric for my wife, but nobody ever sized me up as being a likely prospect for a Packard or a Locomobile or a Pierce-Arrow. Never, as sales manager of this company, was I approached by a salesman of one of them.

"One day I met Howard Marmon at the O. A. C., and he said, 'Hawkins, why don't you buy a Marmon?' 'Because nobody every asked me to buy one,' I told him. 'But I am asking you now.' 'Well, as you are that much of a salesman I will buy one.' 'What kind do you want?' 'A limousine.' 'What do you want to pay for it?' 'Any price you say is right.' 'A special body?' I said 'yes, and have so-and-so make it in New York.'

"Along came the car with a bill for $5,900. I paid it. I hadn't had it long when a Pierce-Arrow salesman came to me and said, 'I didn't know you were in the market for a high-grade car! 'And I answered, 'Well if you were a salesman, why didn't you?'"

KILLING THE ASSOCIATION

After the difficulties surrounding the formation of a Trade Association are surmounted, the members should see to it that they do not kill their fledgling. "Auto-Links" suggest nine ways in which a trade association may be killed. Read over this list: There is plenty of food for thought therein.

First. Don't come.

Second. If you do come, come late.

Third. If too wet or too dry, too hot or too cold, don't think of coming.

Fourth. Kick if you are not appointed on a committee, and if you are appointed never attend a committee meeting.

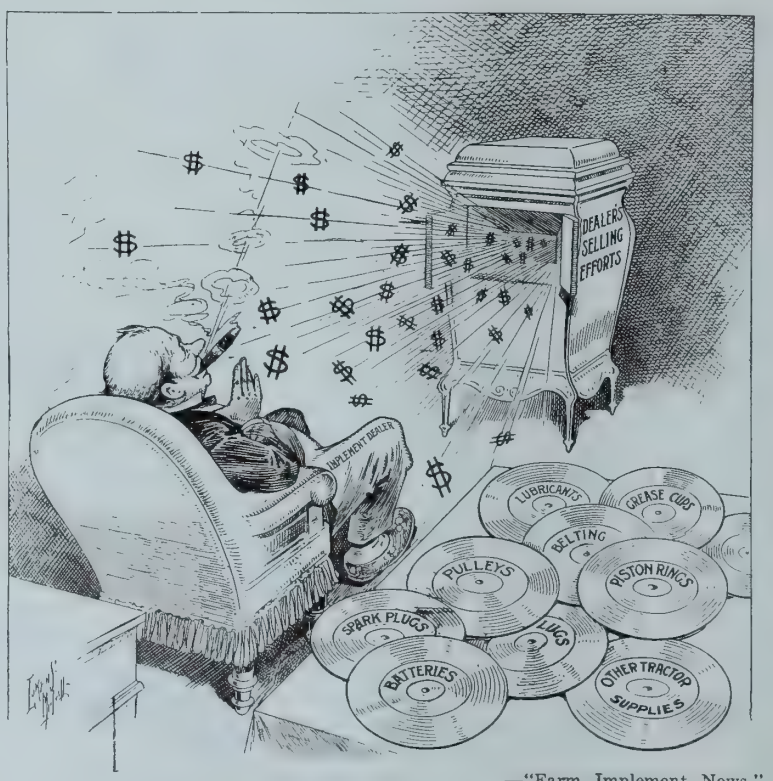
Fifth. Don't have anything to say when you are called upon.

Sixth. If you do attend a meeting, find fault with the proceedings and work done by other members.

Seventh. Hold back your dues, or don't pay them at all.

Eighth. Never bring a friend who you think might join the association.

Ninth. Don't do anything more than you can possibly help to further the association's interests; then when a few take off their coats and do things, howl that the association is run by a clique.



—"Farm Implement News."

There's Good "Music" in These New Records.

THE "EMPTY EYE"

They say that a person is not really famous until they get a nickname. Many politicians and publicists have had their reputations enhanced owing to the fact that they had a nick-name which appealed to the popular fancy, and helped to distribute their views broadcast. If the initials "T. R." were mentioned in a newspaper article, or in the course of conversation, it is about 100 to 1 that there would be no person among those present who would not know to whom the initials referred. Also, if any one in England, or throughout the English-speaking world, mentioned "Tay Pay," it is pretty generally understood that reference is made to the well-known Irish writer and member of Parliament.

A member of the staff of this paper was in Detroit a few days ago, and learned that the advertising fraternity there were referring to us as the "M. T. I." We have recognized all along that the name of this publication is quite a mouthful, but when we ask any person to suggest a better they fail to come through with any useful suggestions. So, we commend the "M. T. I." to all our friends who want to save time in either writing to us or in speaking of us. And, say it fast if you like; it won't offend our sensibilities.

LARGER SAMPLES, PLEASE

We are glad to encourage a custom which two manufacturers of automotive equipment and implements have inaugurated. A month or so ago we were exceedingly pleased to receive a sample of a new garden hoe and cultivator, which we turned over to our confrere, the editor of *Farmers' Magazine,* owing to the fact that we live in a city apartment where our share of the garden is about three feet long and seven feet wide. We offered the hoe to the wife, suggesting that she might use it as an egg-scrambler, but met with no encouragement with this bright idea.

This morning the mail brought in a new grease cup, which proves very acceptable. If we were the fortunate possessors of a car, it would be quite useful; as it is, we have turned the grease cup over to one of the members of our advertising staff—they all have cars, of course.

But this is a custom, as we said, which we like to encourage, and we are looking forward to the day when a manufacturer who is placing a new car on the market will send us a "sample" of his product. This, we assure you, will not be turned over to any person else, even if we have to get out and buy the gas ourselves.

IMPLEMENT ASSOCIATION

The implement dealers in Ontario would be wise if they considered the question of the formation of an Agricultural Implement Dealers' Association, as a section of the Retail Merchants' Association of Canada. This question has been mooted in the past and there have been many difficulties which arise to discourage the formation of such an association. But, in this stage of collective bargaining, when capitalists join hands with capitalists, and form an industrial organization, and the laboring man joins a union watch increases his power of bargaining a thousandfold, dealers should organize for their own protection, self-interest, and development.

In Western Canada, particularly in Saskatchewan, there are live associations which the dealer members assert to be particularly beneficial. One of the great difficulties in the formation of an Association in Eastern Canada has been the feeling among many interested, including the officials of the Retail Merchants' Association, that implement dealers are not so much "dealers" as agents. This is a conception which should not be allowed to prevail. A man who handles implements should be more than an agent; he should be on a par with retailers dealing in any other commodity.

We will be very glad to receive expression of opinion on this subject from our readers in every province.

THE OLD FARM WAGON

Some people say that the old farm wagon is dead, and that the horse will shortly be extinct. Of course, if the horse should die out the old wagon will disappear simultaneously, but the sales manager at one of the large wagon manufacturing concerns scoffs at this suggestion, and gives a rough imitation of Walt Mason, in giving expression to his feelings. This is a little off meter, but here is what he says:

"They hand us the dream that the road to town will ere long be a broad, smooth highway—where the gears will not slip nor the flivver go flip, where no traveler wears a frown. But there's always a road from some human abode that is rutted and rugged and rough, where there's hill and there's valley, deep ditch and ravine, washouts and gulleys and chock-holes unseen where the mud is miles deep and some tough. Now, human invention and things without mention are working to smooth out the way; but I'll call attention—you'll get an age pension, before the gas buggy, or any 'go-chuggy' can push the old wagon out of the way. For the good 'ole' farm wagon, I'll say without braggin', if pulled by a good spankin' team, will travel these roads with all kinds of loads, when you 'can't pass' with oil, gas nor steam."

WRITE US A LETTER

There will be a slight let up in the auto, tractor and implement business during the next few weeks. A good way to utilize your spare time could be to write the editor of this journal. We received more than forty letters from readers during May, one of them seven pages long, but we want to hear *from everyone.*

How Western Motors Rapidly Grew Up

IN Canada to-day it is becoming more and more common for a dealer who serves a largely rural community to handle automobiles *and* tractors *and* ploughs *and* farming plants *and* milking machines *and* separators. It is automotive farming which has caused this change to take place, and it is only within recent years that dealers realized it was dollars-and-cents business to combine a number of these inter-related lines.

The up-to-date dealer is going to take advantage of changing conditions and if he is handling automobiles alone it will be found—usually—to his advantage to add tractors and at least a limited line of agricultural implements to his agency. If he is handling farm implements he should lose no time in climbing on the band-wagon and getting after an agency for a reliable tractor. Whether he wants to handle automobiles or not may be perhaps left to his personal inclination and to his judgment of his particular locality.

Western Motors, Limited, is an aggressive and up-to-date automotive and implement agency in Brandon, Manitoba, which has grown with amazing speed—though not too quickly—within the space of less than a year. And the story of *why* they have grown, as well as *how* will make interesting reading to all dealers who now handle one line only, and are contemplating extending their business.

Within the past two weeks we have received at the *Canadian Motor, Tractor and Implement Trade Journal* office a large number of letters from dealers who contemplate adding to their present line or lines.

One dealer writes that he is looking for an agency for a reliable milking machine; another intends to add tractors to his line; and still another sees good business profits in adding wire fencing, cream separators, and an inexpensive car.

During July and August, 1918, negotiations were underway between the organizers of Western Motors, Limited, and their predecessors, the McGregor Motor Company, and September 1 the new company took hold of the agency. At that time only one line was handled, the Ford car.

IT immediately was discovered that the one agency idea could not be made a paying proposition. The directors decided this kind of a business could never be run successfully, so they determined to go out and line up the very best agencies that would work in with each other without overlapping. It was decided that the Dodge Agency would be a big asset along with the Ford. Then it was realized that in a community such as around Brandon it was necessary to get a sound tractor agency, and after considerable investigation Western Motors decided to handle the Fordson.

To handle a tractor without handling a line of implements seems to be unsound business, for whenever a man sells a tractor he can always sell a plow and perhaps other implements. The Oliver Plow Agency was secured and Western Motors were appointed distributors for the western half of Manitoba, and for part of Saskatchewan, for this product. Thus we see that within a few weeks they had lined up an inexpensive car, a medium-priced car, an inexpensive tractor, and various implements—all these last-named being manufactured especially for the Fordson tractor.

Agencies were also obtained for the Roderick Lean Disc for the whole of Manitoba, and at the present time there are thirty-nine agents working for Western Motors selling Roderick Lean Discs A one-man drill and a one-man binder will also be included very soon. Western Motors found that a milking machine could be sold to advantage in the community and the Agency for the Empire was obtained a few months ago; already more than one dozen machines have been disposed of. One of the machines is working in the Experimental Farm and another had been placed in the Dominion Assyrm Farm. Gasoline stationary engines were products that a steady call came in for and so the Empire was added in this line also.

SHOULD a dealer handle a farm lighting outfit? In almost all of the territories throughout the Dominion, says G. J. Nearing, Director of Western Motors, a dealer will find it exceedingly good business if he takes on a lighting outfit agency. Western Motors secured the Alamo Agency and have been appointed distributors for Western Manitoba and part of Saskatchewan.

"If a dealer wants to sell farm lighting outfits successfully," said Mr. Nearing, "let him send a sample out into the country and sell it to the farmer on his doorstep. He will find that his words will not be wasted. Last Fall we sent an Alamo loaded on a truck, and wired up complete, throughout districts around Brandon and this proved to be a great success. This resulted not only in immediate sales being made, but in the educational work which was accomplished and in the lead we thus secured for prospects which have developed during the present spring. There is no use sitting tight in your office and expecting that enough farmers will come into your place of business to make it worth while selling lighting plants. They have to be "sold" on this proposition as they have to be on almost everything else, and it takes initiative and aggressiveness, combined with a little ingenuity, to make these sales.

A full line of automobile accessories is also carried by Western Motors. Their experience has been that when their salesmen have such a complete line as this it makes it very much easier to talk to the farmer, and makes each month's turnover larger and enables the agency to employ more salesmen.

The same old problem of "cash-or-time" arises in this territory as well as in most others throughout the country. They make a parctice in Western Motors of selling Ford cars on time; Dodge cars and trucks strictly for cash; repairs and accessories strictly for cash!

Looking into the future, this company is making plans to handle any new business which they can acquire. It is their intention to open up a large electric service station very shortly, for the simple reason that all Fords which are to come out in the near future are likely to be equipped with the new self-starter and electric lights and it will be a very big matter for them to look after the batteries. A Ford owner must have attention to his batteries the same as he is entitled to have the engine of his car looked after; an up-to-date charging plant is now being obtained, and a man will be hired especially to take charge of it, as well as to do the radiator work and vulcanizing.

Sept., 1918, they started with:
A Ford.

Then they gradually added:
A medium-priced car.
A medium-priced truck.
A repair department.
A tractor.
A plow, and other implements.
A disc.
A milker.
A stationary gas engine.
A farm lighting plant.
A full line of accessories.

Soon they will add:
An electric service station.
A vulcanizing department.
A one-man drill.
A one-man binder.

THUS we are enabled to look behind the scenes, through the courtesy of the Managing Director of Western Motors, Limited, and see just how the "wheels go round." From a "one-horse" agency nine months ago this business has grown up till there is a large repair shop, a big spare part department, and a large office, sales and mechanical staff. Four salesmen are employed on the road, and travel throughout all the territory which Western Motors has the right to cover.

Two service trucks are kept ready to go out into any part of the country at a moment's notice to give service to Western Motors customers. Eight mechanics are at present employed and this number will be increased to ten as soon as satisfactory men can be obtained.

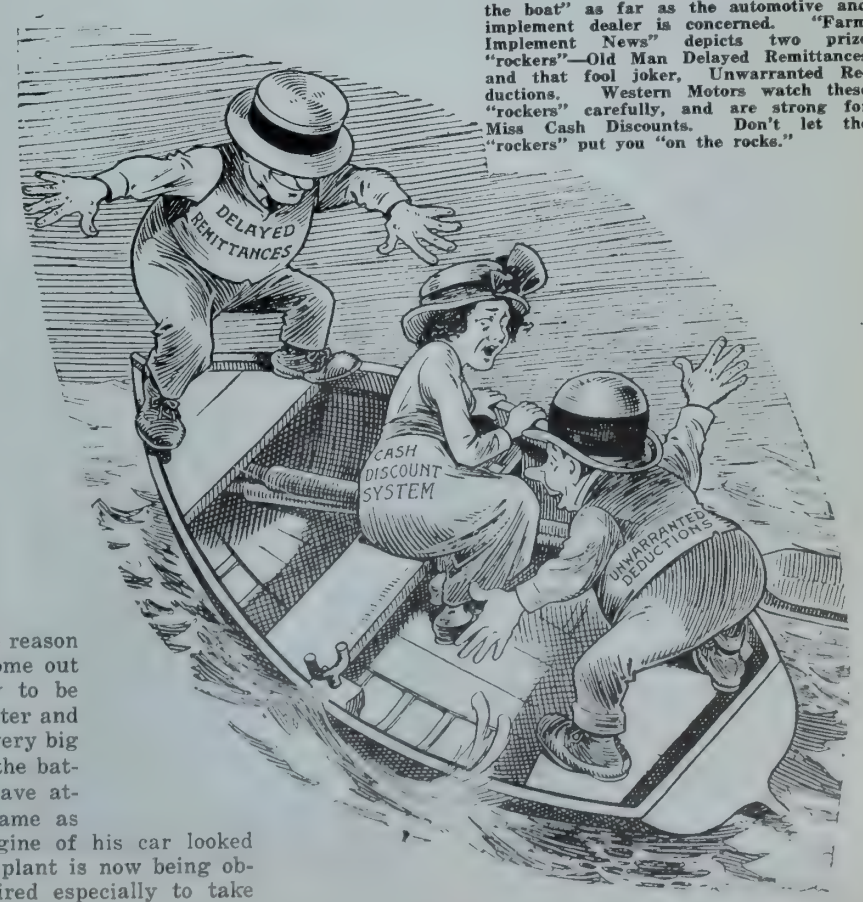
Here is Mr. Nearing's advice: (1)—get a diversity of lines; (2)—advertise extensively; (3)—give absolutely reliable service; (4)—keep on your toes for new opportunities; (5)—use road signs to attract the tourist and country trade.

FORD'S FOREIGN GROWTH

Detroit.—Ford will dot the world with plants when peace is signed. Immediate steps will be taken for the building of assembly plants and factories in many of the foreign nations. In the larger countries there will be factories and in the smaller countries, such as Denmark, Spain and Portugal, assembly plants with an average capacity of 100 per day. The assembly plants will be the first constructed and will become the clearing houses for the parts supplied to them from the Detroit and Manchester, England, factories.

Cadiz and Copenhagen have already been decided upon as cities where assembly plants will be erected, each to cost approximately $350,000, and by this system the Ford interest expect to be able to place on the European market at least half a million cars annually. It is but a question of weeks when the Paris and Bordeaux offices of the company will be reopened.

Ford officials are confident that, beginning June 1, the daily average output of cars in Detroit will be 4,000, a figure they are now striving for, and that the number for the present year will exceed 1,000,000. To produce this enormous output of cars requires the services of approximately 40,000 men.



There are a number of ways of "rocking the boat" as far as the automotive and implement dealer is concerned. "Farm Implement News" depicts two prize "rockers"—Old Man Delayed Remittances and that fool joker, Unwarranted Reductions. Western Motors watch these "rockers" carefully, and are strong for Miss Cash Discounts. Don't let the "rockers" put you "on the rocks."

Get Ready for the Coming Touring Days

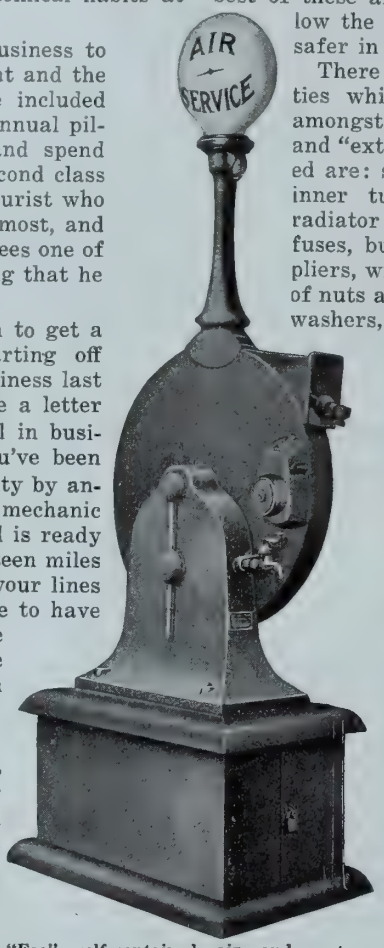
By SCOTT I. DUTHIE

THE tourist season is upon you, and for the next four months there is a nice, fat harvest of tourists' dollars to be gathered by the garage accessory and repair man who is "on his toes" every minute. And it is well to remember that tourist dollars are just a little bit easier to separate from their owners than most other dollars, for when they start off for what my high-brow friend, the Editor of *Motor Age*, calls their "annual hegira to the open highway" they leave their rigid economical habits at home—in most cases.

There are two distinct kinds of business to get after—the more or less permanent and the transient. In the first-class will be included all those auto owners who make an annual pilgrimage to your town or hamlet, and spend most of the summer there. In the second class will be included the trade with the tourist who spends a few hours with you, at the most, and may stop only because he has to—or sees one of your signs and decides upon something that he wants.

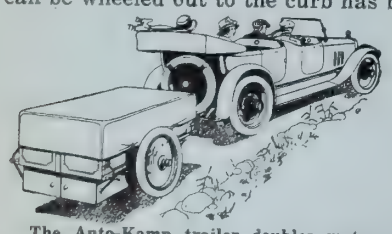
For the first class, it's a good plan to get a carefully-compiled prospect list, starting off with all those with whom you did business last summer, or in previous years. Write a letter to these owners, tell them you're still in business at the same old stand, that you've been forced to increase your storage capacity by another ten cars, that your crack-a-jack mechanic who enlisted in '16 has come back and is ready to give the very best service for 'umpteen miles around, and that you have increased your lines of accessories so that you will be sure to have anything that he may require. Write him to his city address, and then have another letter waiting for him when he reaches your burg.

FOR the second class, the transient, your bait may have to be very carefully dug and prepared, if you want the fishing to be good. There are a number of things you must do. The front of your place must be attractive; don't allow old cars and tires to clutter up the approach. If you have a grass plot, so much the better, and see that it is kept trimmed and watered. Inside, your garage should be clean and slick as a whistle, for the women will form a large percentage of your customers, and they don't want to encounter grease and dirt when they can avoid it.



"Eco" self-contained air and water station for the curb.

See that your mechanics are provided with up-to-date, time-saving kits. A portable service case which can be wheeled out to the curb has been found to bring good results. This case should be fitted so that needed accessories could be brought right out to the motorist, and also with the tools and supplies which your mechanic will require while at work on the car remedying some minor fault, or making a simple adjustment.


The Auto-Kamp trailer doubles motoring's joys, they say.

To supply air, water and gas to tourists will be probably the biggest part of your summer's business. Whether you decide to use "Free Air" as a "pull" to get business you must decide for yourself. There are many of the best-paying garages in Canada which supply free air to thousands of tourists every month. But there are a number of air and water stations which are so devised that the autoist pays for both, and one of the most useful is on the coin-in-the-slot principle. The "Eco" air and water stations are favorites, and are designed so that they may be self-contained, or may be connected to the compressed air system in the garage. A self-contained pumping and service unit is shown on this page, and needs only connection to an electric circuit and the water system of any building for its advantages to be fully appreciated. It makes an attractive-looking stand.

A SELF-MEASURING gasoline service pump should also be installed at the curb. Some of the best of these are so arranged that all the gas is below the surface of the ground, and thus much safer in case of fire.

There are a number of accessories and novelties which can be handled with profit, and amongst the ordinary accessories and "extras" which should be stocked are: spark plugs, tape, tire talc, inner tube valve cores, patches, radiator cement, generator brushes, fuses, bulbs, grease cups, oil cups, pliers, wire on spools, assorted sizes of nuts and bolts, cotter pins, locker washers, tools for roadside repairs, overalls or jumpers, radiator thermometers, collapsible water pail, goggles, spotlights, windshield cleaners, tire tester, battery tester, chains, etc. Camping equipment should not be omitted in towns where there is any demand, or where any such demand can be created.

There is a new Auto-Kamp trailer on the market, made by the Auto-Kamp Equipment Co., of Saginaw, Mich. This trailer can be attached to the car with ease, runs silently, and follows at any speed, and around any sharp corners. It folds up compactly, on the principle of a Pullman berth, and is covered with a close-fitting water-proof tarpaulin. It has a large capacity for everything you really need to carry, and is equipped with food compartments and even an ice-box. It is claimed that the Auto-Kamp can carry complete comfort for a party of four to eight, and it sells F.O.B. Saginaw for $235 and $250.

"Eat in your car or eat on the grass" is the slogan of the "Knickerbocker Made Right" Luncheon Cases, which motorists in the States have found supplies an element of comfort and convenience to an outing which was previously lacking. These cases are manufactured by the Knickerbocker Co. in Chicago, and the illustrations given on this page show more clearly their compactness and convenience than any verbal description could.

A TOURIST motors into your town, and decides that he needs a couple of new tires, or just a spark plug or even a few gallons of gas. Your problem is: How will I get him to stop at MY garage instead of Tom Smith's? Road signs have been found to be a great help. An attractive display sign outside your own place of business "pulls." One garage man in a Western city had a bright idea last year, and put across the best "stunt" we've heard of recently. Bill Devine fixed it with the policeman who stood at the corner of Main street and Fairview avenue, the two main arteries of the town, to use a huge umbrella with the name "Devine's garage" printed in big white letters on the top. What more natural than that the autoists should stop when they saw this sign, and ask the way to Devine's? "Bill" is a live wire and some of our Western readers may know him. His garage is the biggest and most up-to-date in—well, we won't tell you this issue, for we're going to make a suggestion that might embarrass him.

This is the Knickerbocker "Made Right" Luncheon and Suit Case.

TRACTOR MEET AT OTTAWA

OTTAWA.—Plans are now under way for a big plowing match and tractor and farm machinery demonstrations to be held on the Central Experimental and Booh farms, Ottawa, October 14, 15 and 16. The secretary, F. C. Nunnick, reports that a large number of tractor firms have already given definite promises that they will be present. Substantial prizes are being offered. A tractor competition will be arranged in order to give those who own tractors an opportunity to compete in trcator plowing.

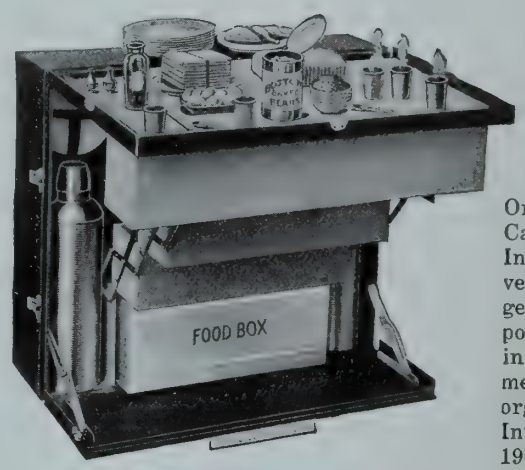


Table is served—in the car or on the grass, with this "Pullman Diner."

I.H.C. Buys P&O

Announcement has been made of the purchase of the Parlin & Orendorff Co., of Canton, Ill., by the International Harvester Co., the biggest and most important transaction in the farm equipment field since the organization of the International Co., in 1902.

The purchase includes the plant and realty at Canton, Ill., all material and finished goods on hand at the factory and ten branch houses, and all patents, trade marks and good will.

Possession will be given July 1. The transfer will be made in a way to cause the least possible interruption to operations at the P. & O. plant. All employees, both at the factory and on the territory, will become employees of the International Harvester Co.

The P. & O. plant, one of the largest of its class in the world, is the outgrowth of a blacksmith shop established in 1842 by William Parlin, who ten years later entered into partnership with William J. Orendorff. The business is now capitalized at $5,000,000 and has a surplus of more than that amount. One half of the stock is owned by the Parlin and Ingersoll families and one half by V. G. Orendorff.

This is the "cop" who tells every inquiring motorist where to find Devine's garage.

This very significant letter was written just across the United States Border. It points its own moral to the Canadian Dealer.

Breckenridge, Minn., March 25, 1919.

Mr. Alex Legge, General Manager,
International Harvester Company,
Chicago, Illinois.

Dear Mr. Legge:

The following may interest you. Frequently this winter I have overheard farmers remark how high cattle, hogs and International Harvester implements sold at farm sales as compared with other stuff. Out at Buffalo, N.D., a few days ago, I ate supper with Sheriff Ross of Cass County. He has the largest farm auction business in southwestern North Dakota, and had cried a sale that day.

I asked him about it and he confirmed it very strongly. He said that afternoon he sold an ———— binder that had run two seasons, for $7.50, and a McCormick that had run seven or eight years, for $135.00. The day before he sold a new ———— for $65.00, a three-year-old McCormick for $175.00, and a four-year-old Deering for $165.00, all at the same sale. He said also that this sort of discrimination applies to seeders and other implements as well as to binders and mowers.

Yours truly,

A. E. CHAMBERLAIN

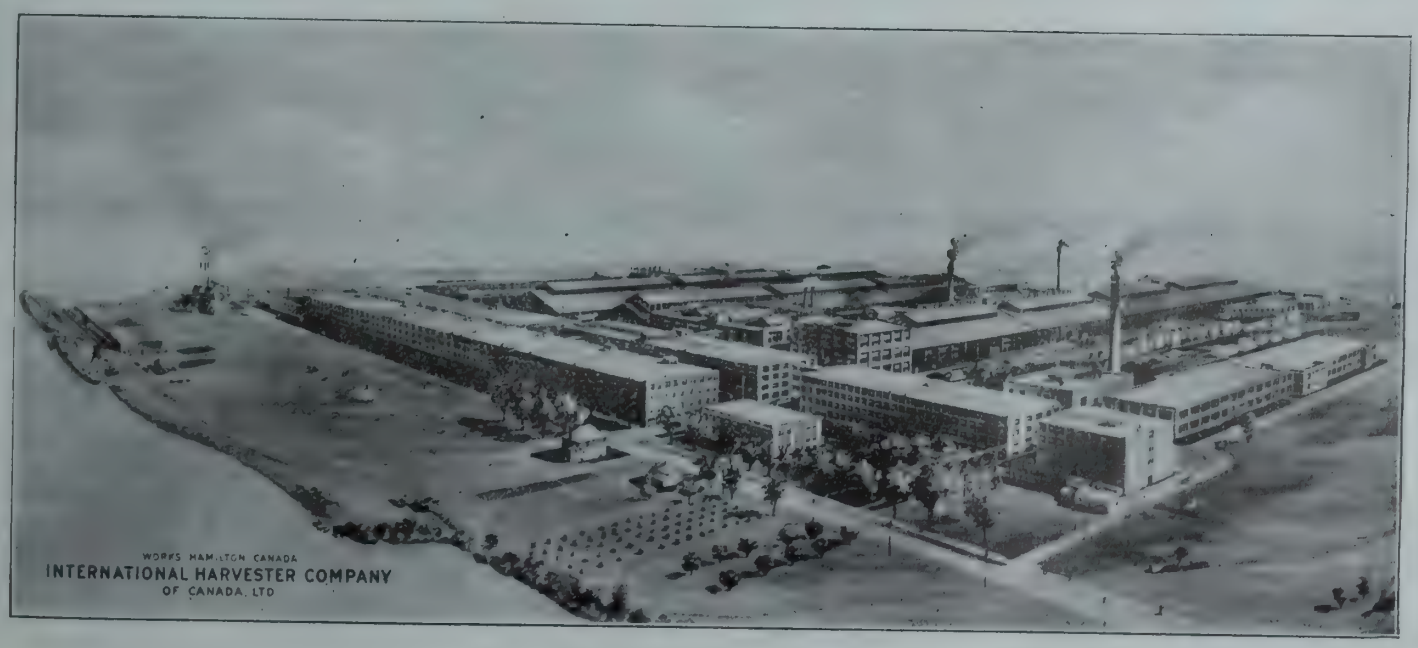
Let this letter serve you as a forceful reminder that the Binder and Twine sales season is just ahead—and that Deering and McCormick remain the ever-reliable lines. Get into communication with the nearest branch house now.

International Harvester Company of Canada, Limited

BRANCH HOUSES

West—Brandon, Man.; Calgary, Alta.; Edmonton, Alta.; Estevan, Sask.; Lethbridge, Alta.; N. Battleford, Sask., Regina, Sask.; Saskatoon, Sask.; Winnipeg, Man.; Yorkton, Sask.

East—Hamilton, Ont.; London, Ont.; Montreal, Que.; Ottawa, Ont.; Quebec, Que.; St. John, N.B.



Sell Your Prospect What He *Really* Needs

By F. H. SWEET

AN agent intending to sell tractors to farmers should familiarize himself reasonably well with belt-driven machines generally used on farms. These are silo-feeders, feed mills, corn huskers, hay balers, threshers, clover hullers, and sometimes stone crushers, lime pulverizers and other equipment. The reason for this is that a tractor intended for field work on a farm should have a motor of sufficient brake horsepower to drive the size machinery already on the farm or that which is urgently needed and likely will be purchased.

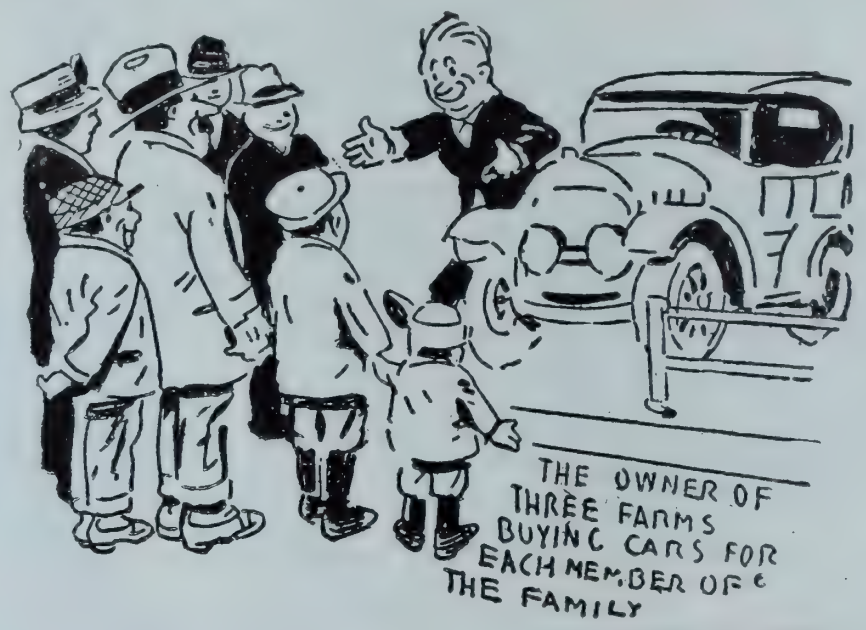
For example, an ensilage cutter with a sixteen or eighteen-inch knife cylinder, and with a blower attached, requires twenty-five to thirty horsepower. It cannot be driven successfully with the best of the many two-plow tractors. If the farmer owns a feed-mill or a thresher which will take approximately the same amount of power, it would be wasteful to discard all of his belt-driven machinery for new and smaller size, to be able to drive them with a small tractor.

The city automobile dealer knows, perhaps, very little about the various kinds of farm tools or the power required to operate them. To talk intelligently to a farmer regarding a practical size tractor for him to use, the dealer should be well acquainted with the amount of power required to operate the various sizes of power farming machines. He should remember that a given size machine may require considerably more power when numerous attachments are added. A blower added to a medium-sized cutter may require four to six horsepower more than the same machine fitted with a slat and chain elevator. Then a wind-stacker and a self-feeder, weighing bagger, etc., added to a medium-sized thresher (28 x 50), handling long, tough grain, will require about fifteen horsepower more than if operated normally with hand-feed table and common slat stacker.

IN suggesting the purchase of a tractor to a farmer, the dealer should himself know something about the draft of different kinds of tillage tools. He should remember, for example, that a so-called three-plow tractor capable of pulling three fourteen-inch plows seven inches deep on a level with apparent ease, may find difficulty in handling a two-bottom fourteen-inch plow cutting at the same depth over a neighbor's field of approximately the same soil, but hilly land. Rolling farms with slight grades—say not over 15 per cent. inclines—may justify the use of a three-bottom twelve-inch gang instead of a fourteen-inch plow in connection with a good tractor conservatively rated at about ten to twenty horsepower. It should also be remembered that under like field and soil conditions a farmer can plow deeper with a three-bottom twelve-inch plow than he can with a gang cutting the same number of furrows of fourteen inches each, pulled by the same tractors. Many tractors are rated very close to their actual or maximum capacity, while others are very conservatively rated. The automobile dealer who will make a little study of farm tractors and other farming machinery will soon be in a position to recommend intelligently to a farmer the size tractor he requires, should the farmer already have his full equipment—disc harrows, crushers, soil packers, grain drills, binders, ensilage cutters, grinders, etc.

As to plowing, the size of the fields, the shape of the lands, etc., should also be considered before selecting a tractor plowing outfit. A man having reasonably level soil and fields free from ditches, rocks, stumps, gumbo spots, etc., tilling upwards of twenty-five acres to a patch, would do well in purchasing a medium size tractor rather than a small one. The big economy in power farming is found in doing the greatest amount of work in the least possible time. There is proportionately as much wear on a small tractor as there is on a large one covering the same distance. If you, therefore, can cut four furrows fourteen inches wide each time you cross the field, it is hastening the work considerably over a two-plow outfit covering the same ground. Small fields—say eight to ten acre lots and up, with irregular boundary lines, where much turning is necessary—are more easily handled with tractors of two and three-plow capacity. It has been found that the most desirable, or normal, speed for farm tractors is from two and one-fourth to two and one-half miles per hour. Practically all tillage tools are designed to operate at approximately this speed, and will do the best work when so used. Consequently, an automobile dealer seeking a tractor to sell to his farm friends should not get the idea that he can take great pride in telling the prospect "how fast she can go." There seems to be a general impression among automobile dealers that farm tractors should be much more speedy than horse gaits. There is no justification for this expectation, and no good reason why tractors should race down the field with a plow or other equipment which, when used at a speed far in excess of the intended rate, will soon be wrecked from such misuse. Neither can the work be done as it should be if a normal or reasonable speed is not adhered to.

Lo! the "Poor" Farmer



The Canadian farmer, from East to West, is ready to buy automobiles and tractors. Nearly every farmer should have one or the other; thousands should have BOTH—It's "up to the dealer" to convince any skeptics.

AN automobile dealer should also acquaint himself with the best manner of hitching or pulling plows or other tools. To do good work and operate on the least possible power, a plow, for example, should be so adjusted and hitched to the tractor that it will run true and level without side draft.

We believe it is not out of place here to give motor merchants who are prospective dealers a little tip on the side as regards service.

The farmer, as a rule, is quite handy with the machine himself. He is not afraid to tighten up a nut, or to adjust a bearing, or to pack a stuffing box for the pump, or to do some other odd jobs of adjustment and repairs. He has handled machinery more or less all his life, and he does not hesitate to get grease on his fingers or his shirt when something needs to be done to the machine to save damaging some part. The automobilist depends more or less on the garageman or dealer who sold him the car to look after the important parts, such as motor, transmission, clutch, bearings, carburetor, magneto, etc. When adjustments—grinding in valves, repairs, and the like—are needed, the car owner generally hires this done. Automobile dealers have made themselves very useful to car owners in this way. They are of the opinion, we believe, that the tractor owners expect a similar service. Much has been written in motor publications suggesting that no one can give Mr. Farmer such genuine, helpful service, if he buys a tractor, as can the automobile dealer. This is undoubtedly true.

Preaching too much on the subject of "service" for tractors for farmers is likely to scare away good prospects, who are apt to conclude that if it frequently requires an automobile or motor expert to keep the tractor going, much trouble can be expected or considerable delay will be experienced, or both. The writer has had considerable experience dealing with farmers, and feels that he knows quite a few of their inclinations, especially as he was first of all a farmer himself. While a farmer appreciates prompt action in supplying repairs or expert help when in need, he anticipates, however, that with his own ability to handle and care for a piece of machinery, expert help would rarely be required. Most farmers expect help only in case of serious mishap or accident. Some allow, of course, for absolute carelessness or neglect on the part of hired help. The average farmer feels that if he himself or his boys will operate the machine, scarcely any trouble will be experienced on account of the extra care such machine will receive at their own hands. All ordinary replacements of parts broken or adjustments for taking up wear, a farmer usually attends to without calling on the dealer.

ONE big thing automobile dealers can do after entering the tractor business is to impress upon every farmer buying a tractor the importance of sheltering his valuable and expensive machine when not in use. If every dealer selling tractors will thoroughly impress upon each customer the saving and all-round satisfaction the owner will enjoy from housing his machinery when idle, much would be done to avoid operating delays and to prolong the life of the tractor, thereby greatly benefiting the industry.

In soliciting orders the automobile dealer should make a practice of always using a suitable order blank, with the prices, terms of payment and description of machinery carefully specified. Farmers in many sections have been in the habit of ordering farm implements, small and large, from dealers on verbal agreements. This costs many implement dealers collection expenses, loss of interest on deferred payments, and other annoyances which could have been easily avoided if orders were taken in a businesslike manner. While most farmers are honest as the day is long, and consider themselves fully responsible for any obligation they see fit to take upon themselves, it has been found, nevertheless, that with the best intentions buyer and seller sometimes become estranged because of some actual or alleged misunderstanding about "the deal" when it comes time to pay.

Tractors are largely sold for cash on delivery, but there are some good sales that dealers are making on a part cash and short time basis. A dealer who exercises good judgment in extending credit, loses little or no money on the short time orders.

After all it is true that the successful automobile dealer taking on a tractor will become so familiar with the operation and care of all its parts that he will be in a position to intelligently and systematically instruct his customers how to use and care for the machine to get the greatest amount of service out of same.

An Italian industrial plant in Northern Italy, under Government control, will shortly begin the manufacture of a new Government motor plow. On the first model of this plow much time and money were spent with the view to placing on the Italian market a plow with a marked improvement in price, quality and efficiency over previous samples. It is interesting to note that, to encourage motor plowing in Italy, the Government has offered to the farmers who purchase motor plows a reimbursement by the Government to the extent of 25 per cent. on the price of the plow. A movement is under way to make law apply to other modern agricultural implements.

A well-tried, and well-trusted friend, the

Frost & Wood Binder

Thousands of prosperous and progressive farmers in all parts of Canada recommend it. They have used it and know that it does splendid work. It's an easy Binder to sell to the farmer who needs a new machine

Many binders will cut grain that is standing nice and clean, but for tangled, heavy, hard cutting, the farmer certainly needs the strength, adaptability and light draft of the Frost & Wood Binder.

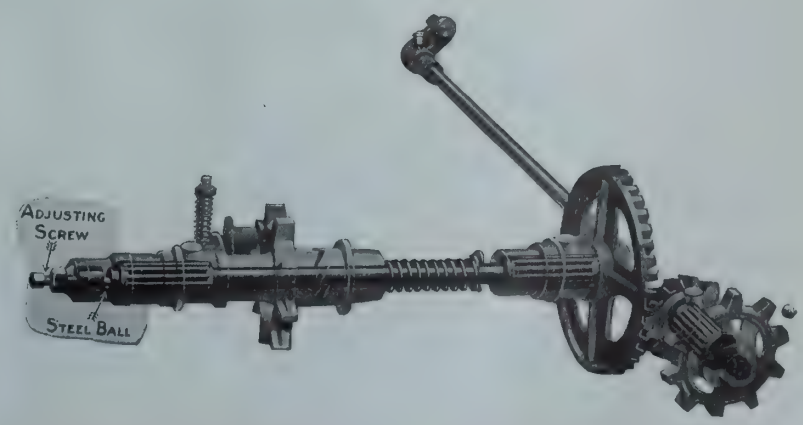
The Frost & Wood Binder is built of the strongest, yet lightest materials that money can buy. We use high-grade dust-proof roller bearings at every friction point, which makes for long life and easy work.

Handy levers work the reel to any position and bring the grain to the cutter bar no matter how tangled or short it is. The Frost & Wood Knotter is very simple and get-at-able. It is a sure tier.

The capacity of Frost & Wood Binder elevators is very large—that means they will handle the heaviest as well as the lightest crop in a satisfactory manner. A special arrangement of the lower elevator roller overcomes any tendency for grain to hang on inside divider.

Big power wheel ensures plenty of power, strong bracing, gives enormous strength; improved cutter-bar construction and many other good features make this the ideal Binder.

Let us send you catalogues showing the famous Frost & Wood Hay-making and Harvesting Machinery—and full line of Implements.



Generous size, carefully fitted, easily oiled and dust-proof bearings in all working parts.

The Frost & Wood Co.
Limited
Montreal SMITH'S FALLS St. John

Sold in Western Ontario and Western Canada by

Cockshutt Plow Co.
Limited
BRANTFORD, ONTARIO

Why Happy Farmer Tractor Lea

Depend upon it, the wide-awake farmer will ferret out the tractor that costs least per horse-power of good work done, or most horse-power for his money. Let him find that tractor in your wareroom! By the nature of its design Happy Farmer Tractor not only can do the work farmers want done, but it does it with fullest efficiency at lowest first cost and lowest up-keep cost! If you want to be shown, examine the Happy Farmer construction and its wonderful records in heavy tests with other tractors. Not only in one test but many has it proven its leadership beyond a doubt.

Happy Farmer TRACTOR

Its consumption of cheap coal oil is exceptionally low. Its perfected kerosene burning engine, with short intake manifold gets maximum power.

How It Gets its Big Draw-Bar Pull

---Its light weight---only 3700 lb.---means that a minimum amount of its power is wasted in propelling the machine itself.---The simple transmission and differential gears run in a bath of oil.

ls---More Power for the Money

Least power is used up between motor and final drive.

---Oil is used over and over again.

---The simple automatic ignition system uses current only at exact instant of contact, ensuring long life of batteries.

---There are about two-thirds the number of parts used in other tractors. This means fewer wearing surfaces and less cost for upkeep.

These power savers and economy features build up 2000 lbs. draw-bar pull which can be operated at lowest cost.

This draw-bar pull is abundantly sufficient for the tractor's hardest task, plowing. It will pull three 14-inch bottoms at an average depth of 8 inches. It means 24 horsepower for belt work.

We have an attractive proposition for new dealers. Territory is rapidly being snapped up. Write us---don't delay.

The Renfrew Machinery Company, Limited

Head Office and Works, RENFREW, ONT.

Agencies almost everywhere in Canada.

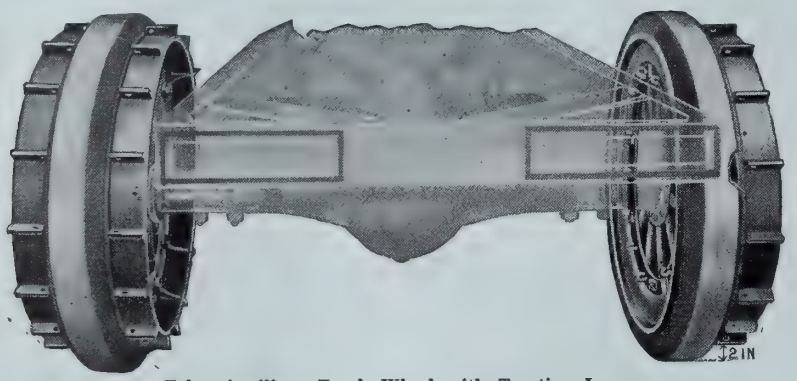
Eastern Branch, Sussex, N. B.

Other Lines: Renfrew Cream Separator—Renfrew Kerosene Engine—Farmers' 2000 lb. Truck Scale.

New Equipment

AUXILIARY TRUCK WHEEL

A NEW rim or auxiliary wheel with traction lugs to be fitted on one or both sides of the driving wheels of a motor truck, to provide traction in sand, mud, etc., is being manufactured by the Foley Auxiliary Wheel Co. of Minneapolis, Minn. These lugs, as the illustration show, are used on both sides of the wheel where convenient and have a



Foley Auxiliary Truck Wheel with Traction Lugs.

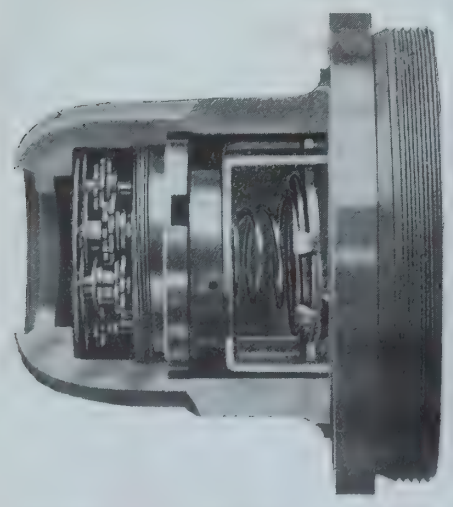
road clearance while the truck is operating over smooth and hard roads. But when soft sand is reached and the rubber tire sinks into it, the Foley Auxiliary Wheel comes into action. The rim surface gives a bearing which prevents further sinking into soft footing, and the tractor lugs secure a firm grip in the soft surface.

When these rims are in place the action is entirely automatic. They can be attached to the inner side of the truck wheel if there is 3 in. clearance on the inside and of course can always be attached to the outside of each wheel. The wheels need not be removed or even jacked up to apply. The price, per set of four, ranges from $30 to $100. Non-skid cross chains can also be secured.

HUB ODOMETER

THE Automatic Drive Dreadnaught Indestructible Hub Odometer was designed to obviate the usual difficulties encountered in fitting a hub odometer to a motor vehicle. It is necessary to attach the recording mechanism of the odometer to the axle. On the rear face of the recording mechanism is mounted a stout double finger of steel which slips into engagement with the castellations of the axle nut and is held firmly in place with a powerful spring. This does away with all drilling, slotting, and pinning. There is no more fussing or fitting to be done. Simply remove the old hub cap and replace it with the Dreadnaught. The Automatic Drive slips into its place in the castellations of the axle nut, and from that minute you get a complete mileage record of every foot of travel, forward or back.

To care for axles which are not fitted with castellated nuts a slotted nut is supplied. There is a special Ford type which also fits Vim and Maxwell. This screws on like a hub cap and also has the Automatic Drive. It is the only Ford type hub odometer we know of that you can buy over the counter, take out to the curb and have it on your car in less than one minute.



Automatic Drive Dreadnaught Indestructible Hub Odometer.

WINTERS' TIMER

THIS is a comparatively new "Complete Timer," placed on the market by L. R. Winters Co., 5315 North 2nd St., Philadelphia. The rollers and bushings are of specially-hardened stock, and the workmanship is said to be particularly high-class.

Commutator Case, Winters' Timer

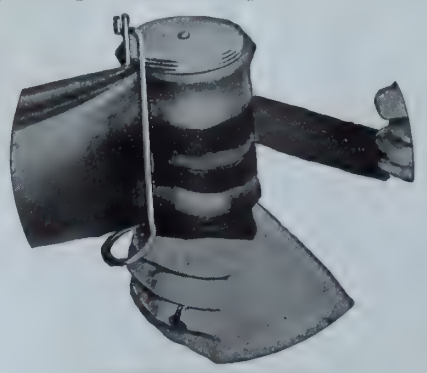
Winters' Timer: Roller

AUTO-NEW-MATIC PATCHER

THE Locktite Auto-Matic Patcher is described by its manufacturer, the Locktite Patch Company of Windsor, as comprising such complete patching equipment, in such small space, that it has been nicknamed the "workshop on the road."

In operation the injured tube is placed around the container and firmly held by the clamp provided for the purpose. This allows the tube to lie smoothly on the cylindrical surface.

There is an emery buffer on the top of the container, while a gasoline swab, cement and a large sheet of canvas-back patching material completes the outfit.

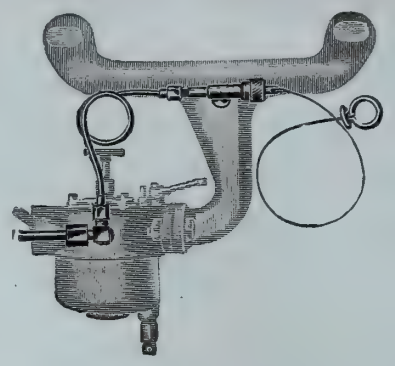


Auto-New-Matic Patcher.

The vulcanization operation requires no heat, and it is claimed that the hotter the road, the tighter the patch clings. With the Locktite Patcher pin-hole puncture or 12-inch blow-out may be repaired quickly and permanently with no waiting for the patch to set.

GAS INJECTOR

THE J. & B. Gasoline Injector for Ford cars is a simple device for priming the manifold of the engine with gasoline vapor, and making easy the starting of the motor. The J. & B. Manufacturing Co., Pittsfield, Mass., manufacture it.



J. & B. Gas Injector.

CONSERVO VAPORIZER

THE Conservo Vaporizer consists of a base in the shape of the carburetor gasket with a crown-shaped mixing head, made of one unbreakable piece of molded aluminum metal. The proper size is furnished for every make of car, and can be installed by anyone in a few minutes between the carburetor and the intake manifold. There are no holes to drill. The only tool needed is an ordinary wrench.

The Conservo Vaporizer effects a change in the gas as it comes from the carburetor, breaking up and spraying the heavy volume into a fine vapor and delivering a perfect and uniform mixture into the cylinders (see cut), thus, for the first time, actually forcing every atom of gasoline to be used to its full efficiency, thus obtaining greater power and flexibility.

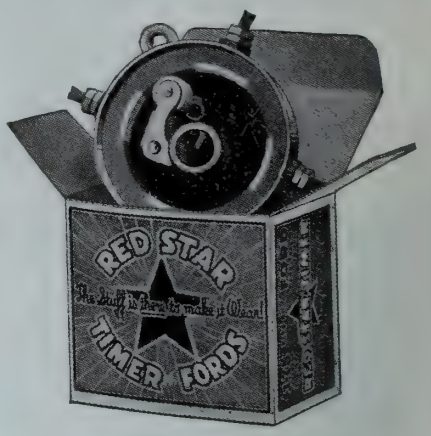
After a series of exhaustive tests, in which the makers claim an actual increase in mileage of from 25 per cent. to 45 per cent., the Conservo Sales Company, who control the Conservo Vaporizer, are offering it to the autoist and truck owner under a guarantee of money refunded if not satisfied after a thirty-day trial. Their address is 225 Fifth Avenue, N.Y.

Conservo Vaporizer.

RED STAR TIMER

THE Red Star Timer for Ford cars, trucks and tractors is made by Auto Components, Inc., 56 E. Randolph St., Chicago, and retails for $2.50. Specially-made fibre is used in the race, the contact shoes are mortised in the fibre and accurately centered and insulated so as to preclude possibilities of a short circuit. The entire shell is made of heavy stamping steel, copper-coated and nickel-plated. The roller is designed to give a maximum of wear.

Red Star Timer, Open



Packed in its box.

The Red Star Timer is packed in an especially attractive red and blue printed carton, which lends itself very well to attractive window display.

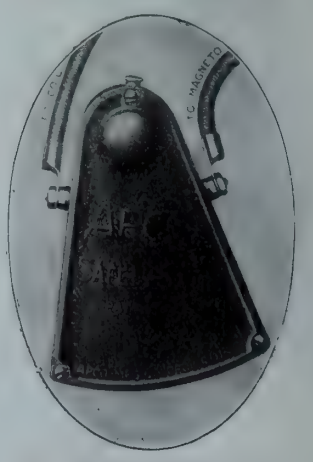
APCO SAFETY SWITCH

THE Apco Mfg. Co., Providence, R.I., have placed on the market a safety switch for Fordson tractors which, they claim, will counterbalance the tendency of a powerful worm-driven tractor to tip over backwards if driven carelessly.

Apco Safety Switch, Open.

The Apco Switch is designed and is guaranteed to absolutely prevent an accident of this kind as it shuts off the ignition current when the front wheels rise to a predetermined height.

It is constructed on a pendulum principle, which is infallible and cannot fail to operate and at the same time it will not swing and break the circuit when the tractor is going over uneven ground.



Apco Safety Switch, Closed.

It is located near the magneto plug at the side of the engine and held by two of the crank case bolts.

The finish is Fordson grey and when installed it looks as if it was part of the regular equipment. Weight ready for shipping five pounds.

BARREL PUMP

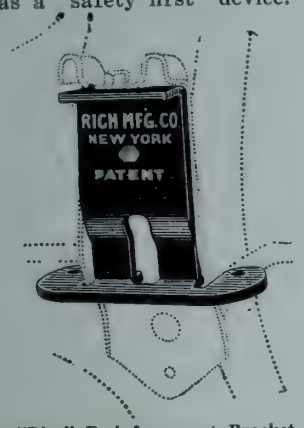
THE Self-measuring Barrel Pump provides an inexpensive means of converting any ordinary steel barrel into a self-measuring outfit for retailing

Self-Measuring Barrel Pump.

oils or kerosene. It is not used for gasoline, because gasoline should be stored underground. The pump is made especially for non-volatile liquids. It is sold by the Milwaukee Tank Works, Milwaukee, U.S.A.

"RICO" BRACKET

"RICO" Reinforcement Brackets, manufactured by the Rich Mfg. Co., 1777 Broadway, N.Y., are advertised as a "safety first" device. They



"Rico" Re-inforcement Bracket.

are designed to prevent the vibration which causes the crank case arms to snap. List price is $30. The "Rico" reinforces Ford crank cases.

NEW ERA MOTO NOSE

TO aid the cooling system of an automobile, an air-intake spout, designed in miniature to resemble a ship's funnel, has been evolved as a radiator cap. It

aims to assist in forestalling overheating by allowing an inrush of cool air to reach the inside of the radiator. A screen is provided in the funnel opening for the purpose of excluding dust and other foreign particles. The manufacturers are: New Era Spring and Specialty Co., Grand Rapids, Mich.

BURKE OXILIATOR

THE Burke Oxiliator is manufactured and distributed by the Automobile Devices Co., Real Estate Trust Bldg., Philadelphia. It is a new and highly-

Burke Oxiliator, Standard Model

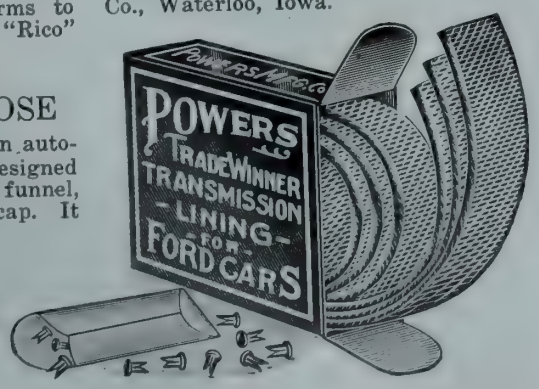
efficient type of air moistener, and supplies the gasoline motor with additional oxygen, needed for complete combustion. This is claimed to be a highly improved

Burke Oxiliator, Ford Model.

device, devoid of either the crudities or defects of earlier devices. There is a Ford model.

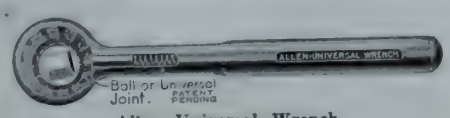
TRANSMISSION LINING

THIS is a popular lining used on Ford cars. It is all cotton, full sized, and treated so that it will not glaze over. It does not contain any wire. While it is not the equal of "Norwegian" lining made by the same firm, it is popular priced and serves the requirements of a majority of the trade. It is packed in three pieces the right length, 23½ inches, and with the necessary brass rivets. The manufacturers are: The Powers Mfg. Co., Waterloo, Iowa.



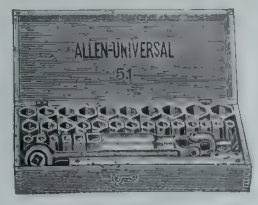
UNIVERSAL WRENCH

THE distinctive feature of the Allen-Universal Wrench, made by Wiebusch and Helger, Ltd., 106-110 Lafay-



Allen Universal Wrench.

ette St., New York, is that it has a ball and socket construction, in addition to the ratchet action, which allows free leverage and makes it possible to get at



Combined Set

nuts and bolts in apparently inaccessible places. The handle can be moved upward, downward or diagonally. A cut of the combined Allen-Universal set is also shown.

FORD TIMER

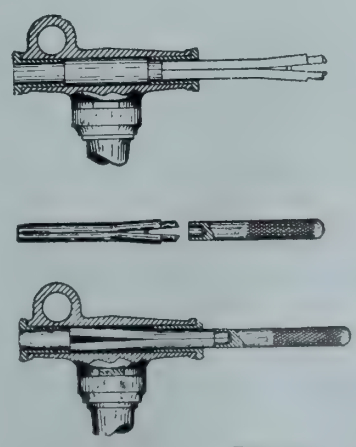
ONE of the many exclusive features of the J. & B. Timer, manufactured at Pittsfield, Mass., is the arrangement for furnishing lubricating oil to the rotor. The oil hole in the Timer Hous-

J. & B. Timer

ing is of ample size to enable you to completely enter the spout of the oil can in the Timer Housing. The oil hole is protected from dirt and dust by a spring hinged cover which is located on the upper forward side of the Timer Housing. The construction of this Timer is such that it eliminates waves in the raceway of the Timer Housing.

BUSHING REMOVER

THE J. & B. Spindle Body Bushing Remover is a high-class tool of high-grade nickel steel, made particularly for removing the bushings from the spindle body of a Ford, Dodge, Overland, Chevrolet, Saxon, and all cars using a one-half inch spindle bolt. J. & B. Mfg. Co., Pittsfield, Mass.

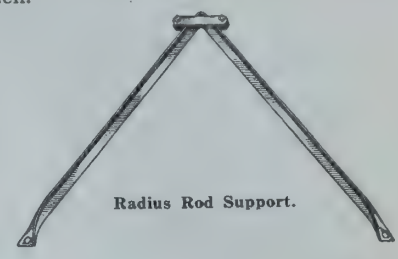


J. & B. Bushing Remover.

RADIUS ROD SUPPORT

THE Gahm-McCormick Co., Streator, Illinois, are producing a front axle support for Fords which, it is claimed, prevents breakage or bending of the radius rod. It is stated that it will make the car run more steadily, and preserves the life of it by eliminating the vibration of the front axle, giving that steadiness to the steering wheel found in heavier cars. It reduces wear on ball and socket at rear of radius rod and is easily and quickly put on.

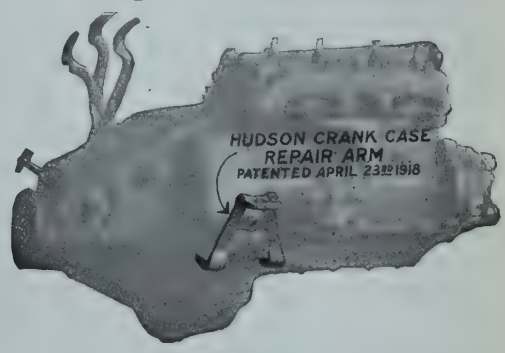
In order to adjust this support, the front axle must be sprung to its original position before it can be attached. The support lists at $1.25, and garage men usually attach it at from $1.75 to $2.50 each.



Radius Rod Support.

HUDSON REPAIR ARM

THE Hudson crank case repair arm, which is illustrated herewith, showing the arm and the arm with motor attached, is designed as a safety device to obviate the snapping of the crank case arm. This is a product of the Hudson Motor Specialties Co., 1932-4 Arch St., Philadelphia. This repair arm was patented about a year ago, and since being placed on the market is said to have given every satisfaction.



STEERING DEVICE

THE Lincoln "Safety First" steering device is manufactured by the P.P.P. Tube Co., 3030 McGee Street Traffic Way, Kansas City. It is said to assure absolute protection against breakage or disabling of the regular steering equipment on Ford cars. This device is applied directly to the moving arm of the wheel and axle, each wheel independently protected by its own attachment, and depending upon the steering wheel when turning corners, only. The Canadian distributor is L. L. Colby, Moose Jaw, Sask.

VICTORY SIREN

THE Victory Siren, product of the Inter-State Tool & Mfg. Co., 3419-21 Rutger St., St. Louis, is announced as

Victory Siren

the "perfect warning signal." It is said to trill and warble like a bird, with a range of two full octaves and 1,000 different tone combinations.

Some Recent Tractor Models Placed on

AUTOMOTIVE TRACTOR

AMONG the many new designs and ideas in farm tractor construction, none is attracting wider attention or receiving more thought at the present time than line control and power steering.

This form of tractor construction has been thoroughly developed along practical and economical lines in the accompanying illustration of the automotive tractor which will shortly make its appearance on the market as the product of one of the pioneers in line control and power steering—The Automotive Corporation of Fort Wayne, Indiana, with General Offices on the 6th floor of the Shoaff Building in that city.

The active executives of the organization of the Automotive Corporation are the following men, who are all well-known and of wide experience in the automotive industry: A. H. Wyatt, president and general manager; Wm. Hulin, secretary and treasurer; Jno. L. Larkin, assistant general manager; E. H. Ruck, chief engineer, and L. H. Wyatt, factory manager.

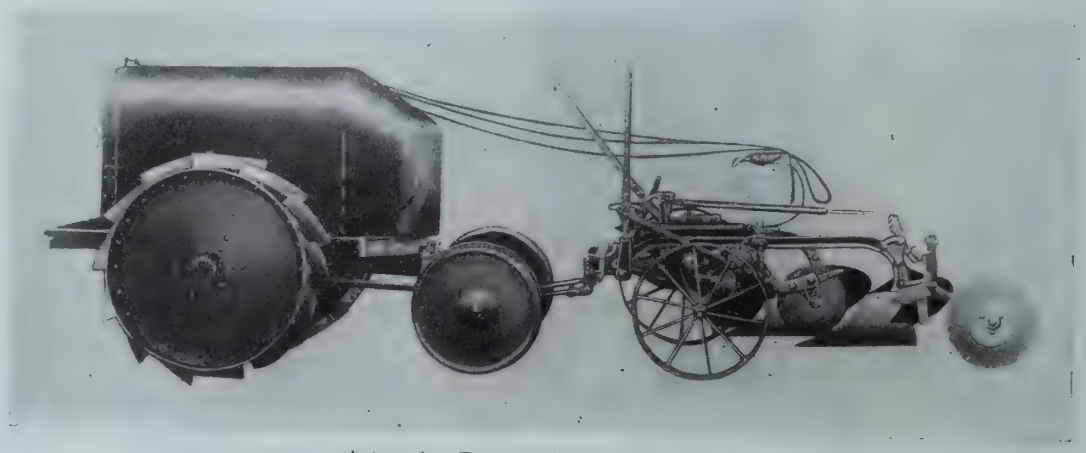
The present factory of the company is located at Napoleon, Ohio, but the main production will be carried on in a new set of factory buildings soon to be erected at Fort Wayne, Indiana.

By use of their line control it is possible for the operator to go back any desired distance from the tractor and have as perfect control of every operation of the tractor as if he were sitting on the tractor itself and at the same time having within easy reach all levers of the implement or vehicle that is being handled or operated, thus obviating the necessity of having one man on the tractor and one man on the vehicle or implement.

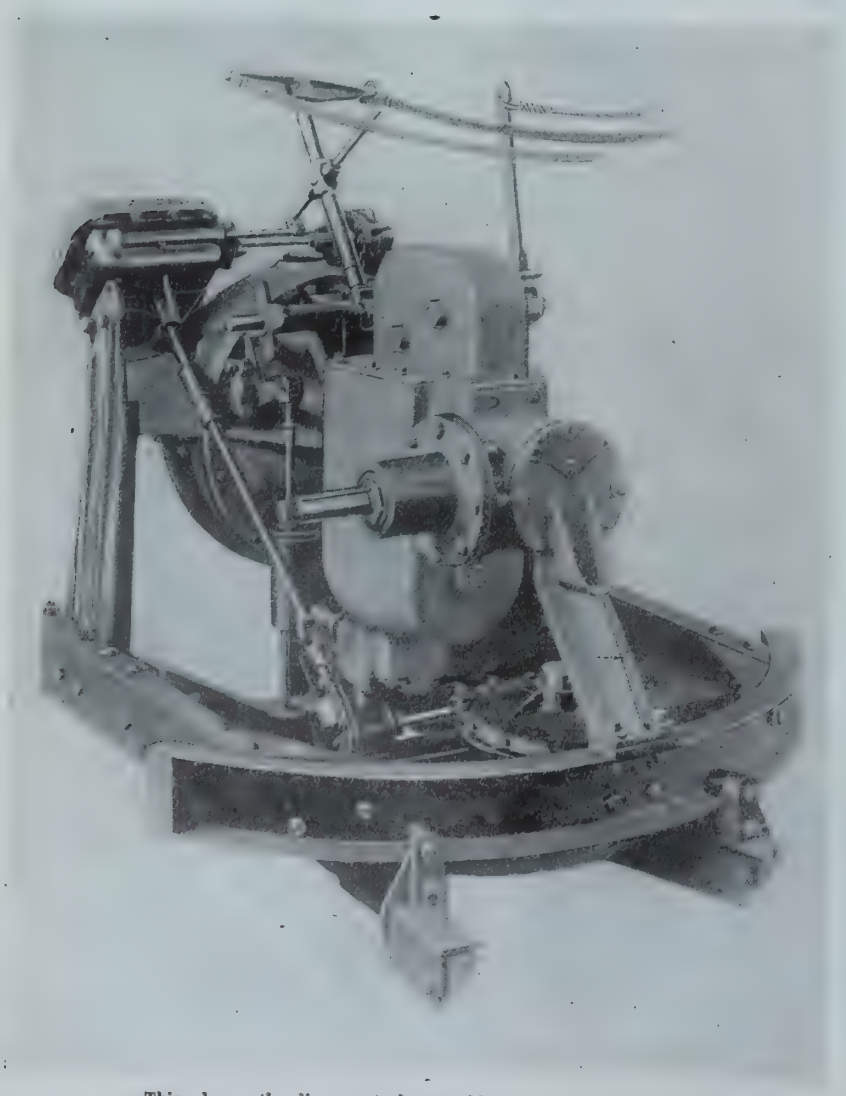
The tractor is steered by power. The power is taken from the cam shaft of the motor at the rear end, between the last cylinder and the bell housing of the fly wheel, from there through small bevel gears to a splined shaft upon which is keyed two two-degree leather cone clutches, a collar between them on which operates a fork that holds the clutches in a fixed position by the use of tension springs while they are not in use.

The shaft upon which is fastened the shifting fork is fastened to a lever at one end that works at right angles to it and passes through a hole in the clutch operating lever, which lever has a "T" shaped head, the driving lines being fastened to the extreme ends of the cross head on this lever, making it possible to steer the tractor no matter in what position the clutch operating lever may be.

On the shaft upon which are keyed the two small clutches, and so arranged that the clutch operates in them, are two bevel gears, which are constantly in mesh with a third bevel gear. These gears are loose on this shaft and do not turn until the clutch is engaged in them. As soon as the clutch is thrown into either gear this sets the entire steering mechanism into operation and the direction in which it turns depends upon which clutch is engaged.



Automotive Tractor with Plow Attached.



This shows the line control assembly of the Automotive Tractor.

The advantages claimed in favor of line control over lever and wheel control and hand steering are many and varied and may be classed as follows:

1 (and principally). It permits of one man operation at all times.

2. The operator always has all of his work before him.

3. The operator of the tractor, including steering, requires practically no effort on the part of the operator.

4. Simplicity of operation.

5. Comfort. The operator is always away from the heat of the motor, out of the dust of the tractor.

6. By line control, there are no extensions of rods or levers to make.

7. The steering gear, being irreversible, is always positively locked and can be set to go in a straight line or any circle down to twelve feet in diameter.

8. The motor speed and consequently the tractor speed is always under the instant control of the operator.

9. All gears are shifted. The four positions, two forward, neutral and reverse are controlled by the third line just as easily as if the operator had his hand on a solid lever.

10. The seat for the operator can be changed to any position as the circumstances may require. In plowing the operator sits directly behind the furrow wheel. In loading hay he goes up with the load. In binder operation he occupies the binder seat from which position he can manipulate all necessary levers. The same is true of mowing machines, manure spreaders, harrows, discs, seeders, etc. In other words the operator is always on the job.

Although very little advertising of a national character has been undertaken by the company yet the news of this remarkable tractor is being carried to all parts of the world and inquiries are reaching the company from all points of the compass, a large number of which emanate from agricultural centres in Canada. It was the original intention to establish a branch factory in Canada but it is now believed by the executives of the company that it would be more desirable at the present time to arrange with a responsible Canadian manufacturer to undertake the production of their tractor for distribution in Canada.

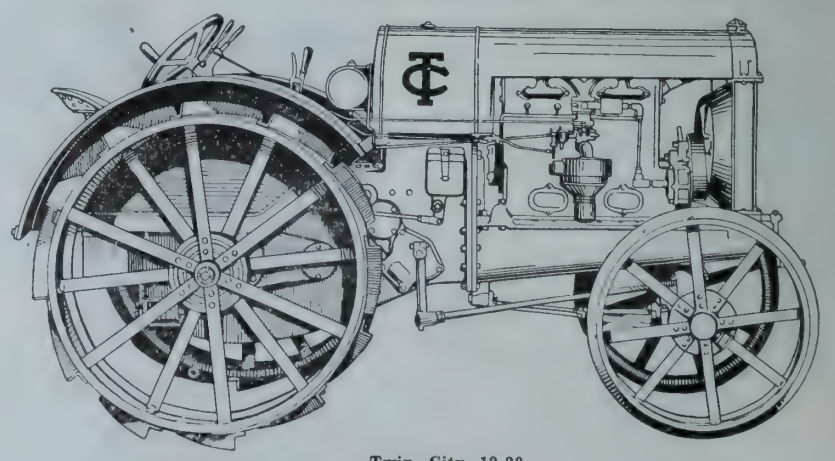
NEW TWIN CITY 12-20

AN outstanding feature of the Walla Walla, Washington State, Power Farming Demonstration held five weeks ago, was the new Twin City "12-20" tractor, with its 4-cylinder 16-valve-in-the-head engine. This tractor, made by the Minneapolis Steel & Machinery Company, is the first to appear with this new type of power plant, so that visitors to the demonstration found the latest addition to the Twin City family of more than ordinary interest.

Naturally, chief interest centres in the motor, and as this new "12-20" is, so far as we can learn, absolutely the first tractor to adapt for slow speed work the double valve area, (which has so successfully produced tremendous power for racing cars), one wants to know what it means to real tractor efficiency.

Putting it briefly, this special 16-valve-in-the-head engine means maximum power on a lower fuel cost. The two exhaust valves take off all burnt gases so quickly that there is nothing to interfere with the quick and easy inflow of fresh fuel from the double valve area of the two intake valves. This means that the fuel mixture in the combustion chamber is pure gas, and that the chamber is completely filled, so that the explosion naturally produces more power. It also means freedom from troubles that arise from an overheated engine, because it is the presence of burnt gases in the chamber that produces this overheating with pre-ignition.

There is no question about the unusual power of this new engine, for while the tractor is rated at "12-20," its engine actually develops 36 H.P. on kerosene, and 42 H.P. on gasoline, at one thousand revolutions per minute, which is the controlled speed of the engine. The power and the low cost of operation are the main things that concern the farmer in purchasing a tractor, and the Minne-



Twin City 12-20

the Market, together with a New Trailer

apolis Steel & Machinery Company seem to have succeeded in meeting these requirements with this new type of engine.

The makers of the Twin City "12-20" know from experience that the farmer and dealer both "fight shy" of complicated machinery, and they have spent time and money to make this engine simple and easy to "get at." Those who examined the new "12-20" at Walla Walla were surprised to find how quickly and easily access was obtained to any part of the engine, and as the cylinder head is removable, grinding valves and cleaning the combustion chamber are simple operations. The removable cylinder sleeve and the counterbalanced crank shaft (to reduce vibration, as well as wear and tear on bearings) are among other important features. When in operation the entire engine is fully enclosed and its standard equipment includes the latest devices that are beyond the experimental stage.

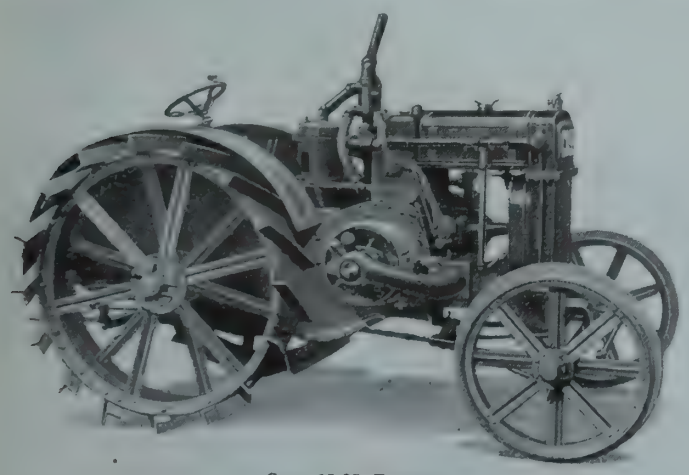
This new "12-20" tractor is being manufactured by the Minneapolis Steel & Machinery Company on a production basis, and an extensive sales and advertising campaign is now being launched to secure national distribution.

The Twin City manufacturers have Canadian branches at Winnipeg, Regina and Calgary.

A LaCrosse Caravan.

CASE 15-27 TRACTOR

THE J. I. Case Co. has added a fourth to its line of tractors—the 15-27. Production is under way, and 5,000 are being turned out on the first run. The 15-27 is described as one of the latest and best of medium-sized tractors, and shows some interesting features in construction.



Case 15-27 Tractor.

The main frame departs from the usual type in that it is a one-piece casting, amply ribbed for extra strength, which in addition to being the main tractor frame also acts as the lower half of the engine crankcase, and the housing for the transmission, rear axle, and bull pinion shaft, making disalignment of the gears, engine bearings, and rear axle impossible. The front axle is pivoted at its centre on a steel king pin to the front end of the frame, thus making a three-point support for the tractor frame.

The motor is vertical, four-cylinder, four-cycle, 4½ by 6 inches, set crosswise on the one-piece main frame, thus permitting the use throughout of hardened steel spur gears with cut teeth, allowing the belt pulley to be mounted directly with the clutch on the crankshaft and on the steering side, making it easy to line up with the driven machine, eliminating all bevel gears, worms, chains, and so forth. All parts of the motor are accessible, the removable cylinder heads giving ready access to the valves and pistons, while two large hand-holes afford access to the crankcase for adjustment of bearings. The cylinder barrels are removable so that a worn or scored barrel may be removed and a new one put in its place quickly and easily, and without making necessary the replacing of the entire cylinder block. The governor is of the centrifugal ball type running in oil; the main bearings are bronze-backed babbit mounted in the frame masting; the crankshaft has three main bearings with a total bearing length of 12⅛ inches; the connecting rods are drop forgings of 1-beam sections, especially heat treated; the pistons are of special iron ground to size; lubrication is a combination force-feed and splash system; a dustproof, high-tension magneto with impulse starter is provided, eliminating the need for batteries for starting; an efficient air-washer assures against dust or grit getting into the motor through the carburetor; the cooling system is the same as on high-grade automobiles, controlled by a thermostat automatically keeping the cylinders at the high temperature needed for the most successful burning of kerosene but safeguarding against overheating.

The tractor is very compact, the length over all being 127 inches, width 68 inches, and shipping weight 5,600 pounds. There are two forward speeds, 2½ and 3½ miles per hour. The drawbar is located to bring the pull under the rear axle so that the weight of the load has no effect on the steering of the tractor. The machine will pull three 14-inch plows in tough sod, baked soil, or up reasonable grades, while it will readily handle four plows under favorable conditions. It will drive a 26 by 46 thresher with feeder and windstacker. A clutch of the expanding shoe type is used and operated from the driver's seat.

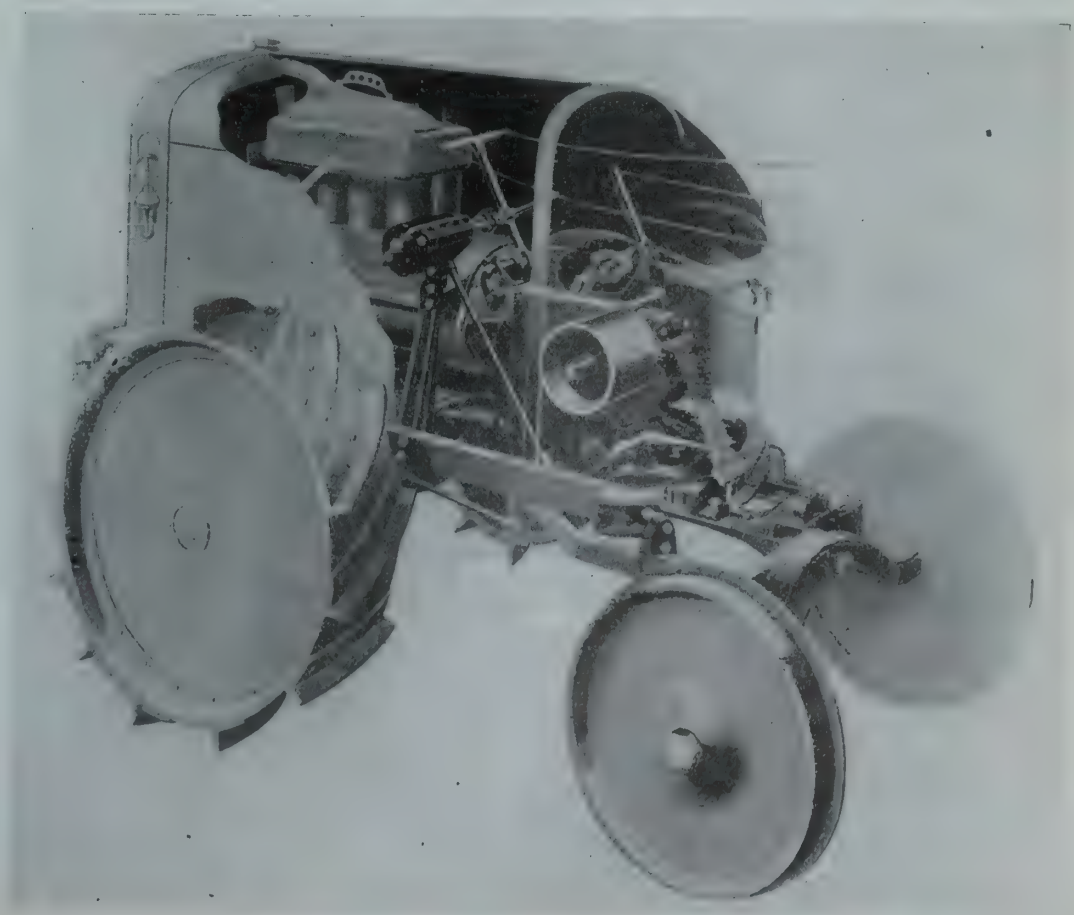
Special attention has been given to the drive wheel design of this new Case machine. These are 52 inches in diameter, having 12-inch face, strongly constructed of ¼-inch plate for tires, and reinforced by angle-iron felloes, to which are riveted twelve spokes, each 3/16-inch thick and 3½ inches wide; the hubs are malleable, four rivets holding each spoke to the hub flanges. Several types of lugs or cleats are made for the wheel, any of which will be furnished on order, as also extension rims with 8-inch face.

The builders state that this rating is only 80 per cent. of the actual power this size tractor can develop, insuring a liberal reserve for peak-load pulls.

The builders of this machine have designed it primarily for the farmer owning a moderately large farm and who has need of a tractor capable of performing a multitude of tasks about the farm. Canadian-Fairbanks, Morse distribute the Case line in Eastern Canada.

REMARKABLE CARAVAN

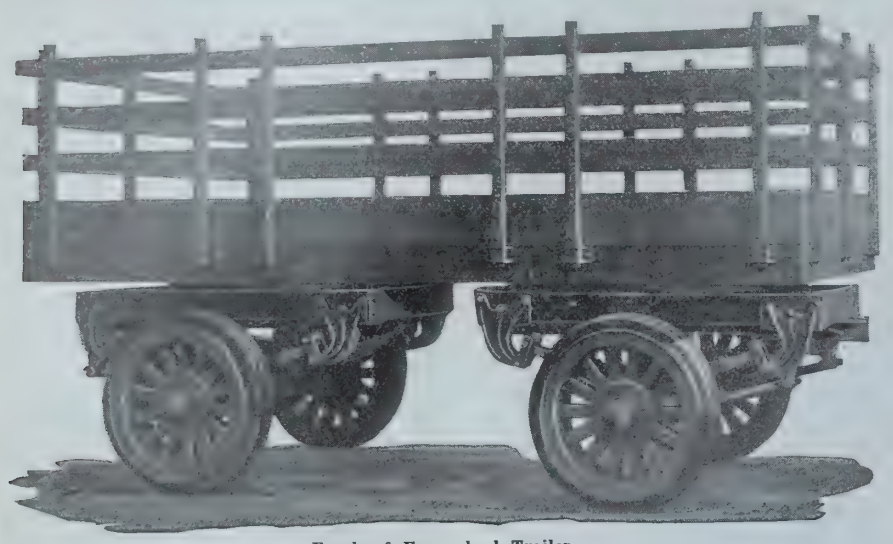
THE model "G" kerosene-burning tractor, the newest product of the La Crosse Tractor Co., is rated at 12-24 h.p., and is distributed in Canada by the Renfrew Machinery Co. The "G" tractor shown in the picture on this page recently headed a caravan which traveled from Alton, Ill., clear across the state of Missouri, 303 miles, to the National Tractor Show at Kansas City, which journey was made absolutely without accident or breakage, through road conditions that were deemed absolutely impassable. Furthermore, kerosene was used in the radiator as a cooling medium, in order to test the cool running of the motor, and it required only 1½ gallons to replenish the waste at the end of the journey. Such a record is unique and speaks volumes for the efficiency, durability, strength, lubrication and ability to burn kerosene perfectly, as well as its ability to be driven readily with lines—as they were passed through the dash-board of the front wagon and handled from the driver's seat in the cab—which factors are possessed in their entirety solely by the La Crosse Tractor.



Cross Sectional View of Automotive Tractor.

FRUEHAUF TRAILER

A NEW four-wheel trailer has been placed on the market this spring by the Fruehauf Trailer Co., Detroit, Michigan. It has numerous distinctive features, chief of which is the circle steer principle, which has been installed and eliminates the knuckle steer axle. Literature giving all necessary information is now ready to be distributed to agents who may be interested.



Fruehauf Four-wheel Trailer.

The practical objections to the use of old-style four-wheel trailers are eliminated by the adoption of two of the oldest principles used in the construction of various types of heavy haulage vehicles such as freight cars and street cars.

The first of these is the use of double trucks, or two identical, independent and reversible sets of running gear, for carrying the frame. The second is the circle steer.

In addition to simplifying the construction and giving a far greater sturdiness to the trailer unit, the application of these two old principles to the modern trailer has eliminated what was formerly the greatest objection to use of four-wheel trailers with modern trucks—the danger of the trailer "snaking"—failure to track the truck faithfully, with the resultant terrific jerking strains and stresses on the truck and its power plant.

Two other features of this new unit that are proving of interest to buyers, are superior cushioning of the load made possible by the use of double trucks, or gears, under the frame, and the fact that the foundation for any type of body is built in the frame itself.

Springs are relieved of all strain of hauling the load—the load being pulled through the dead square axle of the front truck under the frame. Radius rods absorb all "thrust," further relieving the springs of any strain other than that of cushioning the load. And in addition to these features, the construction of the double trucks, or gears, permits the big springs placed approximately eleven inches further apart than customary on trailers or trucks—providing more resiliency and cushioning power, and enabling the axles to carry in the neighborhood of 1,000 pounds greater weight.

The frame construction provides the foundation for any type of body, allowing the floor to be built flush with the top of the channel frame, and adding to the strength and rigidity of the frame itself. This construction enables the owner to build the ordinary stake and rack body at approximately one-fifth of the customary cost of such bodies.

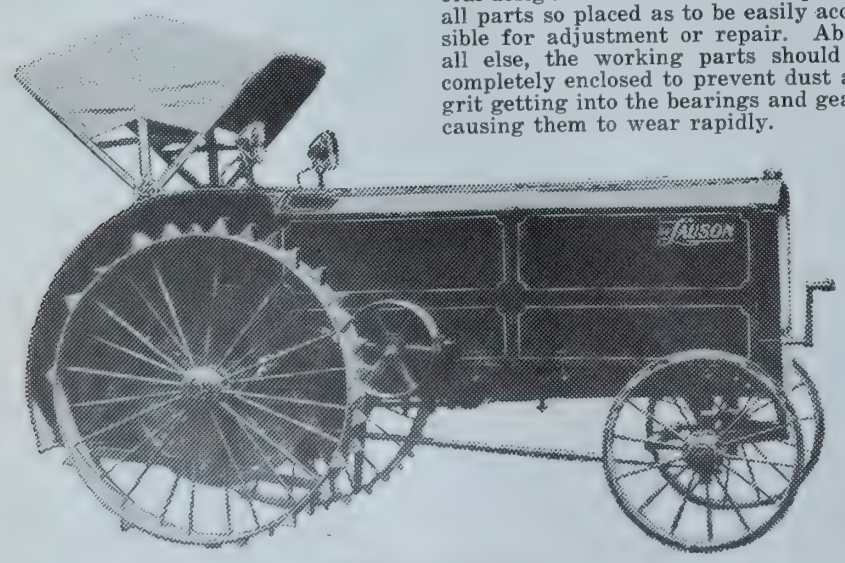
LAUSON 15-25

IN most discussions on the tractor, too much stress is laid on plowing, says G. M. Watson, vice-president and sales manager of the John Lauson Mfg. Co., New Holstein, Wis.

As a matter of fact, plowing represents only one phase of tractor utility on the farm, constituting about 50 per cent. of the work which the tractor is called on to perform. The properly-designed tractor is one in the construction of which every consideration is given to belt work and hauling. In the matter of belt power, the tractor should be powerful enough to operate a medium-sized thresher, otherwise threshing becomes slow and unprofitable. This applies also to silo filling and the other belt work needed on the average farm.

The Lauson 15-25 will operate a 10-inch grader or large portable stone crusher with ease and is just the right size for county or township road work.

An important point to remember in the selection of a tractor is that the average operator of the farm tractor is usually inexperienced in its operation. It is therefore, important that the general design of the machine be simple and all parts so placed as to be easily accessible for adjustment or repair. Above all else, the working parts should be completely enclosed to prevent dust and grit getting into the bearings and gears, causing them to wear rapidly.



Lauson 15-25 Tractor.

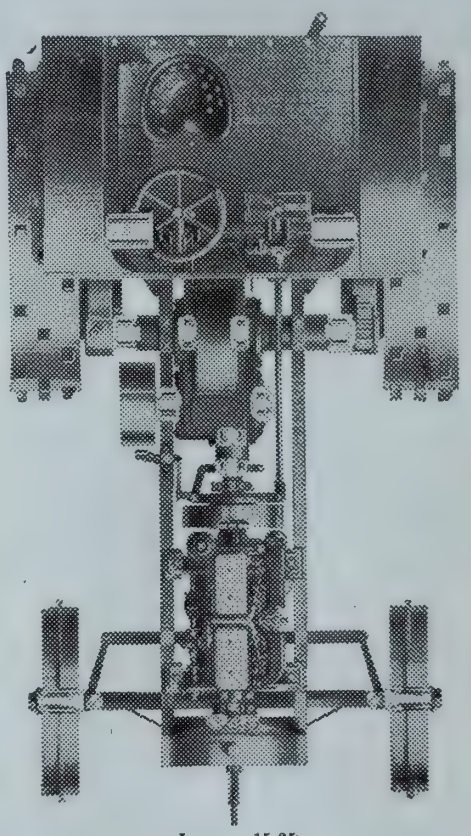
This machine is simple in design and therefore easily understood by the most inexperienced operator. The general construction is almost identical to that of standardized automobiles and motor trucks, with which the average farmer is thoroughly familiar, and service can be had in most any garage.

All parts of the tractor—including the bull gear or final drive—are enclosed in a dustproof, oil-tight housing and run in a bath of oil. The tractor dealer who wishes to be free from annoying service expense and worry will appreciate what this simplicity of construction and thorough covering of all parts means in the actual way the tractor will work.

To guard against stripping the gears by an inexperienced operator, the Lauson 15-25 is fitted with a gear shift locking system.

The Lauson is a four-wheel type, one front and one drive wheel running in the furrow. The steering gear is non-reversible and as the front wheel crowds the furrow, this means that the strain of steering is taken off the operator and he can devote most of his attention to the implement he is working—in fact, can step off the tractor and take a walk.

The engine is the Lauson-Beaver heavy duty 4½ by 6 valve in head. Has extra heavy crankshaft and large bearings. The supersized manifold is specially designed for the use of distillate or kerosene. It develops over 30 per cent. surplus of power so that it can meet unusual conditions.



Lauson 15-25.

Finally, the comfort of the man who rides the machine is provided for, so that he will not feel stiff and sore after a day's work. This is effected by a roomy platform and a special spring seat which, combined with the smooth running engine, makes riding a pleasure.

LAUSON ROAD TRAILER

REALIZING the big future for tractors for road work, the John Lauson Mfg. Co., New Holstein, Wis., has brought out a special model for this service. When grading loose dirt roads, scarifying old macadam roads or pulling a heavy load up a grade, it has been found the ordinary medium weight farm tractor with standard wheels does not give the proper traction, but is inclined to slip. This is especially true if a lug suitable for road work is used. To overcome this difficulty, heavy construction and solid cast drive wheels with a 16 in. face and special road lugs are used on the Lauson Special Road Tractor. The extra width of this wheel and proper weight gives excellent traction under any road conditions. These solid, extra heavy and substantial wheels do not dent when they strike a boulder or bump over rough roads. There are no spokes to work loose.

Drive wheels are equipped with a flat cleat, something of the type found on heavy steam engines. It is shaped so that it takes hold and gives good traction without tearing or injuring the smoothest road bed.

Any operator knows what throwing a shovelful of sand and dust into the working parts of a tractor will do. A tractor working on road work generally works in a constant cloud of sand and dust. Unless it is absolutely dust-proof, abnormal wear occurrs. Every working part on the Lauson Road Tractor is enclosed in absolutely dust-proof housing and *all* gears run in a bath of oil. Even the cooling fan is driven with enclosed gears.

To pull an 8 ft. to 12 ft. grader on a deep cut is a steady straining load. A heavier, 4¾ in. x 6 in. Lauson-Beaver engine has been provided in the Lauson Road Tractor giving it the welcome surplus power. It is rated 15-30.

The cooling system is controlled by a Sylphon Thermostat which keeps the motor hot. This causes good combustion and prevents raw fuel from passing by the pistons and diluting the oil in the crank case. The valve in the thermostatic unit remains closed when the motor is starting. This permits water to circulate only through the pump, and the water jackets around the cylinders; allowing the motor to quickly reach a temperature of 160 to 180 degrees, whereupon the valve opens automatically, allowing full circulation through the radiator. Adjustable canopy top is included as regular equipment. A gear-driven fan is also provided and the gears are enclosed.

Tearing up old macadam and other hard roads is "jerky" work, putting a terrific strain on draw bar. The Lauson Road Tractor is provided with a heavy solid draw bar. This draw bar will not give or loosen. It also has a swinging draw bar for pulling scrapers and other loads where a short turn is desired.

Lauson Road Tractor.

NEWS — OF THE TRADE FOR THE TRADE

BRITISH COLUMBIA

VERNON.—Greer and Butler, with Fordson tractors, recently conducted a big demonstration near Dog Lake.

VANCOUVER.—The Pacific Tractor Company, of Vancouver and Victoria, will in the future be distributors for the entire province for the "Cletrac."

ALBERTA

LETHBRIDGE.—C. Allen Jack Company, capitalized at $25,000.00, has been formed to handle tractors and other farm machinery.

CALGARY.—Norton and Leif, well-known local implement agents, have taken the agency for the Cleveland Tractor Company.

CALGARY.—Frank E. Davis, special field representative of the La Crosse Plow Company, Wis., is doing special field work here for the local branch of the Grain Growers' Company.

CALGARY.—At the Alberta Industrial Congress, to be held here during August next two prominent agricultural implement manufacturers are announced as leading speakers: Harold McCormick, president and active head of the International Harvester Company, and Finley P. Mount, president of the Advance-Rumely Company.

SASKATCHEWAN

SASKATOON.—The Saskatchewan Auto League held a big convention here May 26 and 27.

SASKATOON.—More than 40,000 automobile licenses have been issued for the current year.

SHELLBROOK.—Hadley Bros. opened a new garage June 1, 110 feet deep with 34 feet frontage on Main Street.

CANORA.—Kelly Bros., local garage men, have taken on the agency for the Turner Tractor, and will carry an especially large stock of repairs.

WATROUS.—A. P. Coates, formerly foreman of the Empress Foundry and Machine Shop, has taken over the Repair Department of the Watrous Auto and Machine Company.

CRAIK.—The Canadian Curtis JN4 airplane, purchased by George Kounkel, arrived early in May, and is being kept in the owner's garage. It is attracting a lot of attention in this locality.

PRINCE ALBERT.—The Massey-Harris Company is contemplating building a new warehouse here and making this city a distributing centre for this section, according to statement made by D. H. Wood, local Massey-Harris representative.

MANITOBA

WINNIPEG.—The National Farm Tractor Company, distributors of National Tractors, have been incorporated.

WINNIPEG.—The Western Canada Motor Car Company, Limited, has created a separate Truck Department with A. H. E. Beckett in charge. The National Truck is geing handled.

WINNIPEG.—After their first six months of business in this city, Grace Motors, Ltd., report a most successful period, gross business totalling $146,000, according to the announcement made by Helm Walker, Western manager.

WINNIPEG.—Winnipeg will soon be made the distribution centre for the entire West for Chevrolet cars, by means of the establishment of zone distribution headquarters here, R. H. M Chevrolet sales manager, has announced.

WINNIPEG.—Corporal David Sager, who returned the middle of May from service with the Signal Corps in the American expeditionary forces, has been appointed traffic manager for Motor Products, Ltd. On his way home Corporal Sager spent ten days at the Willard Battery Factory in Cleveland.

WINNIPEG.—The Turner Tractor Sales Company, distributors for Western Canada of the Turner Simplicity Tractors, have appointed the following new dealers: Foxwarren, J. K. Hay; Gladstone, J. K. Grose; Dauphin, Eagle Garage; Roblin, Perry Bros.; Glenella, Bloom Bros.

FREDERICK ROBINSON PASSES ON.

It is with profound sorrow that we announce to the trade the death of Frederick Robinson, director and former vice-president of the J. I. Case Threshing Machine Co., Inc., of Racine, Wis.

Mr. Robinson passed away at his home in Racine on April 22nd, 1919. He was born in Kenosha, Wis., Nov. 15th, 1862. He attended the Kenosha public schools and later graduated from Lake Forest University.

The first position that he held was as office man in the office of the National Vehicle Company, of Racine. In 1887 he went to Denver, Colo., where he engaged in the structural iron industry for several years.

In 1896 he returned to Racine and became purchasing agent of the J. I. Case Threshing Machine Company. In 1898 he was one of the purchasers of the entire stock of the company and was elected vice-president and general manager.

In 1914 he retired as vice-president, but remained on the board of directors and took an active interest in the affairs of the company.

Few men in Wisconsin possessed a more keen business mind than Mr. Robinson.

ONTARIO

PRESCOTT.—S. A. Bowers is building a new garage.

COLLINGWOOD.—The Fire Department has been "motorized."

GALT.—Albert Porter has disposed of his auto truck business to Bert Gill.

ELORA.—J. A. Aitchison, local Overland dealer, has opened a new garage and a show room.

LUCAN.—The Motor Sale Company is building a new and large garage on the Matheson property.

ST. MARY'S.—The Martin Garage is announced as open for business in Wellington Street North.

NORWOOD.—Coleman Elliott, for ten years an expert mechanic in Toronto, has opened a new garage.

FORT FRANCES.—John McVey, general machinery agent, has taken the local agency for the Ford.

TEESWATER.—Ab. Strom has leased the old woollen mill store and will turn it into a modern garage.

CHATHAM.—The Canadian office of the Buckeye Traction Ditcher Company, of Findlay, Ohio, has been moved from Eberts. Ont.. to this city.

WELLAND.—The John Deere Mfg. Company. Ltd., has added to their line for the Ontario trade the Hurst Orchard and Field Sprayer.

OTTAWA.—Small tractors are in demand in Ukraine, Russia, according to a cable received here by the Department of Trade and Commerce.

STRATHROY.—Crook and Bayton have moved into their new premises, and have now one of the most up-to-date automobile and repair shops in the locality.

WINDSOR.—Commencing May 12, the three thousand employees of the Ford Motor Company of Canada went under the new minimum wage scale of $6.00 per day.

OTTAWA.—J. P. Morris, 73 George Street, will carry for distribution a full line of John Deere repairs, in order to speed up the delivery of these to dealers in the Ottawa district.

ALVINSTON.—McIntyre and Nicholson, for several years Chevrolet agents, have dissolved partnership and the agency will now be conducted by J. W. Johnston and D. A. McIntyre.

DESERONTO.—The Spencer Bros. partnership as garage owners and motor repair dealers has been dissolved and hereafter the business will be carried on under the name of S. W. Spencer.

NORTH TEMISKAMING.—DuBreuil and Beaudry have purchased the implement agency business until recently carried on at Ville Marie by Prosper Gagnon, and transferred it to this town.

TORONTO.—J. Allen, a local furrier, had his battery stolen from his car and a few minutes later re-sold to him for $3.00 by the thief, who had obligingly offered to get a "new" battery for him.

PALMERSTON.—The O. X. L. Manufacturing Co., now being organized with Mr. John Youngson as general manager, is planning to put on the market a strictly Canadian Storage Battery.

TORONTO.—F. J. Sleight, managing director and treasurer of the Willys-Overland Company, made an extensive trip through the Maritime Provinces and Quebec during the latter part of May.

HARRISTON.—H. E. Burrows, of the International Harvester Company agency in this district, has been given charge of the motor truck business for Eastern Canada, and will make his headquarters at Toronto.

WINDSOR.—C. N. Dwyer, for several years Canadian supervisor of Service for the Studebaker Company, has been appointed general supervisor in charge of Service for the Cleveland Tractor Company, of Canada.

WELLAND.—The John Deere Mfg. Company, Ltd., announce the appointment of Ben Rothwell as service manager, for the purpose of giving Deere dealers prompt service, and to obviate errors in shipment and other delays which may occur.

OTTAWA.—A big plowing match, tractor and farm machinery demonstration will be held on October 14, 15 and 16 under the auspices of the Eastern Ontario and Western Quebec Ploughmen's Association. A large number of tractor firms will be represented.

GUELPH.—James A. Parkinson, Jr., for the past three years sales manager for the Aspinwall Canadian Company, Ltd., with headquarters at Jackson, Mich., has resigned, to take effect June 1. He is joining the Wagner-White Company, of Jackson, grain jobbers.

WINDSOR.—The Cleveland Tractor Company of Canada, Ltd., announce the following addition to their sales organization in Canada: Maritime Provinces, R. C. Archabald; Quebec, W. H. Welsh; Ontario, C. N. Beers; Western Canada, C. R. Burcheil, formerly with the Studebaker Corporation of Canada.

TORONTO.—J. F. MacKay, formerly business manager of the Globe, and, until recently treasurer of the Russell Motor Car Company, has been appointed secretary-treasurer of the Willys-Overland, Limited, West Toronto. This is in line with the company's policy of thoroughly Canadianizing its organization.

HAMILTON.—J. L. Acker, general sales manager of the National Steel Car Company, Limited, reports the closing of large export orders for National Motor Trucks, which, with Canadian orders, will total almost a million dollars, and assure the active operation of the National plant for many months to come.

TORONTO——According to Dr. Rutherford, C. M. G., who addressed the Ontario Veterinary College at its closing exercises recently, the light horse will be replaced in the city by the automobile within the next few years, but the draft horse will be used in cities and towns for fifteen or twenty years and probably longer than that in the country.

TORONTO.—A new motor company on a large scale is announced, General Motors of Canada, Limited, with an authorized capital of $10,000,000. R. S. McLaughlin, president of the McLaughlin Motor Company, Oshawa, has been elected the President of this new concern, which is allied to the G. M. C. in the United States, a three-hundred-million-dollar corporation.

TORONTO.—The manufacturers of "Scandinavia" Transmission Lining report that a number of dealers and jobbers are unlawfully selling other transmission linings under their registered trade name of "Scandinavia." The manufacturers complain that the imitation material is generally made with either shoddy or short stock cotton and has not the body or the lasting qualities of the genuine lining.

QUEBEC AND MARITIME

CHARLOTTETOWN.—Prince Edward Island has recently passed a law requiring non-glare lenses to be used on auto lamps.

MONTREAL.—The Maple Leaf Mfg. Company, recently incorporated at Ottawa, will manufacture "All Canadian" motors.

SUMMERSIDE.—A new garage, the "Prince Central Garage," was opened May 15, in the Holman Garage building, which recently underwent extensive repairs.

HALIFAX.—The Motor Sales Company, for some time local representatives of the Cleveland Tractor Company, has been appointed distributors for the entire province. G. A. Cerry, formerly with the I. H. C. in the Maritime Provinces, has been appointed manager of the tractor department.

QUEBEC.—A. K. McCarthy, of the Shaw Hardware Company, is announced as the president of the Eastern Canada Motor Truck Company, at Ottawa, with a capital of $500,000, which is embarking upon the manufacture of an all-Canadian two-ton truck, to be known as "The Veteran," and selling at approximately $3,000. This company is authorized to manufacture and deal in motor cars, motor trucks, trailers, aeroplanes. hydroplanes and other types of aircraft.

Mr. Dealer!

IF

Price
Quality of Material
Workmanship
Close Skimming
and
Easy Turning

are considered by your customers in buying a Cream Separator, then we claim that the

Sanitary King

is the best buy in Canada to-day. Write for prices and terms.

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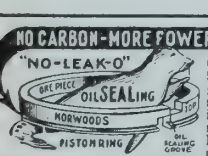


On market 5 years. Over 5,000,000 in use. Every set guaranteed. Popular thru service. Don't rebore cylinders. "NO-LEAK-O" makes good when others fail. Made different. Give results no other ring can. Write for booklet. Order from nearest Jobber, or write direct.
NO-LEAK-O PISTON RING CO., Baltimore, Md.

Useful Ads. For Dealers

ONE of the most useful "Aids to Dealers" which is published by any anadian farm equipment manufacrer is that which is gotten out by the ntario Wind Engine and Pump Comny, Ltd. In this sheet of paper, ued for their 1919 advertising camign, and also to supplement the efrts of their agents, there are shown irty copies of advertisements, pracally every one having a special apal.

These ads are about four inches wide five and a half inches deep, and some the "pulls" are: Take your work off ur hands (for the engine); Cut your ne in half (for the wind pump); ve time—labor—money—with wind wer; Promote farm efficiency (for e farm engine); Another hired man r your farm; Toronto Silos are very ofitable; Water, where and when you ed it; More leisure hours for the rmer; City conveniences for the rm; Let the wind save you time and oor; Employ a hired man requiring no lary.

These advertisements are being used a large list of rural papers throughout Canada, running weekly from arch 3 to November 24. The Comny and the local representatives each y 50 per cent. of the cost.

He Knew Something About It.—"Do u know anything of the art of husndry?"

"I ought to: I've married off five ughters."—*Plow* and *Tractor*.

Repairs *and* Spares

AERO ENGINE

DURING the last four years the gasoline engine has shown itself to be worthy of a high place in military as well as in commercial and industrial spheres. Its uses during the war were many and varied, but perhaps in no branch of the service did it cause such great development as in the air service. Its use in this branch has also been the direct cause of wonderful developments in itself and in the course of a few years it has grown to be a reliable source of power.

The decrease in demand for aero engines with the cessation of war thus affording greater opportunities for acquiring the highly perfected type of engine has led many to contemplate its possibilities in other directions.

In considering this it should be remembered that the aero engine is primarily a light weight engine and in this design and manufacture the question of weight per H. P. is a very dominant factor. This led to previously unheard of reduction in weight which was accomplished largely through reducing the various parts of the engine to the very minimum in weight, still allowing a small factor of safety. In comparing automobile and aero engines we find that the weight per H. P. of the former ranges from 10 to 25 lbs., whereas in the latter it ranges from 2 1-2 to 6 lbs. per H. P. Such a reduction of weight can only be obtained at the loss of certain other qualities and therefore we find that more frequent and more skilful attention are necessary to maintain aero engines in good condition than to obtain as relatively good results from the automobile engine. Aero engines are intended to have a top overhaul (or carbon removed and valves ground, etc.,) after 50 hours flight and a complete overhaul and inspection after 100 to 130 hours flight. The same attention is not necessary for an automobile engine, partly because the same perfection in running is not so essential, but more as a result of its being a stronger built, heavier engine.

While it is true that the aero engine if used for pleasure purposes in the auto or motor boat would not be required to maintain the same high efficiency at all times, yet it is equally true that the conditions under which it would be required to work are less ideal and on that account less is to be expected from it. Though unsuitable for extensive use on "land" work, it is, however, reasonable to expect that in the near future many of the developments and features of designs of the aero engine will be incorporated in our automobile engines. The demand for aviation engines will be ever-increasing and further developments forthcoming.

OVERLAND PREPARES

Toronto.—Willys-Overland, Limited, has recently placed orders covering their requirements of dies and tools for use in the manufacture of their new line of cars. Their orders covering dies alone will tax the die-making facilities of Canada to the limit. It is said that a single set of dies for use in shaping a certain part of the new Overland car will cost over forty thousand dollars.

IGNITION TROUBLES

THE Editor of the M. T. I. has received an interesting letter from C. K. Nelson, of the Splitdorf Co., which says, in part:

The writer has noted with much interest an article appearing under the heading of Accessories and Repairs, the heading: "The Worst Bug-Bears" and an extract from a report from the U.S. Dept. of Agriculture in answer to a questionnaire sent out by them to a number of farmers.

The results of these answers would lead one to believe that there is not a satisfactory magneto or spark plug on the market. As Canadian representative of one of the largest manufacturers of ignition devices, I think it might be well to advise your readers that it is apparent to us from observations of a large number of users of engines of all classes that where the users of such engines are unable to place their finger on any trouble they may have they are very prone indeed to blame the magneto, for the reason that it is an electrical and mechanical device composed of a number of parts which the ordinary mechanic or repair man frankly confesses he does not fully understand.

If the magneto is actually at fault we quite frequently find that it is due to some minor troubles which might be readily taken care of by the engine user himself, although we strongly advise that the magneto be left alone as much as possible. The magneto should be given the following attention occasionally, however:

Oil the bearings with a light 3 in 1 oil, using only a few drops at a time, about every week. The points should be kept clean and adjusted properly, in accordance with the manufacturer's specifications.

PROSPECT "SOLD" HIMSELF

Not long ago Geo. D. Ash, district sales manager for the John Lauson Mfg. Co. New Holstein, Wis., dropped in for a visit with Mr. R. E. Olds, a prominent gas engine manufacturer at Lansing, Mich. The talk turned to tractors and Mr. Olds passed the remark that when a tractor was put on the market and was dust-proof in every respect and all gears running in a bath of oil, and he went on to enumerate other important features which he stated a tractor should have, he would then be ready to buy a tractor for his farm in Florida.

Without knowing it, Mr. Olds described the Lauson Tractor in detail and all Mr. Ash had to do was to produce his literature and order book and say, "Here is the tractor you just described," and the deal was completed.

LIFTING FORD ENGINES

The use of an old steering rod fork provides a very convenient method of lifting a Ford engine with a block and tackle and without the use of "slugs." The steering rod being cut off flush at the fork, a hook is formed and through the hole in it is passed an ordinary cylinder head bolt. The head of the bolt holds it fast in the fork while the other end is screwed into a bolt hole between the third and fourth cylinders. When lifted in this way it will be found that the engine is easily balanced and may be conveniently manipulated.

TRACTOR AS A RATKILLER

A novel way of utilizing the tractor has been discovered by J. C. Boyd, a farmer living near Virginia, Neb. He has learned that it is effective in ridding his place of rats. Recently he backed his machine up to a corn crib which was infested with rats, turned the exhaust into the crib for about five minutes, and afterwards gathered up about a tubful of dead rodents.

HOME-MADE OXHILIATOR

The explosion or combustion of gasoline and air mixture in the cylinders of an engine is always accompanied by an unavoidable carbon deposit, the presence of which is detrimental to engine power. Any discovery which would lead to the prevention of the carbon deposit would be indeed welcome to motorists. This may, however, be partly remedied by allowing a certain quantity of moist air to enter the cylinders with the explosive gas, due to the fact that the extra oxygen liberated from the moisture causes a more complete combustion. Several motor accessories for the purpose of supplying moist air to the engine have lately been put on the market, and have been previously noted in the Canadian MOTOR TRACTOR AND IMPLEMENT TRADE JOURNAL. These take the form of an extra air inlet to the induction pipe, the air being first apssed through water and becoming saturated with moisture.

A home-made fixture of this kind may be made from an ordinary sealer or fruit jar quite easily. Into the lid of the jar are soldered two pipes, one extending close to the bottom of the jar and the other about one inch into it. The pipe extending further into the jar is left open to the atmosphere as an air inlet, while the other is connected to the interior of the carburetor induction pipe through a pet cock, to which there may be attached an adjusting lever from the dash board. The jar should be mounted on a platform or bracket on the dashboard or any convenient place near to the induction pipe. When on the road this may be operated in the same manner as an extra air inlet, the amount of moist air admitted being regulated so as to obtain the best mixture.

WATCH THAT "KNOCKING"

While most drivers of automobiles are aware of the presence of an "advance and retard" spark lever on their cars, it is surprising how many forget or are in ignorance of its uses while on the road. This control of the ignition system constitutes a variable ignition, it being intended that the spark be timed to occur earlier or later in the cylinders according to the engine speed, as obviously one spark position will not be suitable for all engine speeds. Such a control would not be fitted on ignition systems if it were not intended to be used and its uses are best exemplified in hill climbing. A rather "stiff grade" giving an extra load to the engine often causes a decrease in engine speed on the hill, even though the throttle be fully open. This is generally accompanied by a "knock," which does not necessarily indicate a loose bearing, and where these are "tight" is caused by the spark being too far advanced for the speed of the engine, thus producing the explosion too much ahead of "top dead centre."

Under these circumstances it will be found that retarding the spark often causes the engine to "pick up" anew, and prevents change to a lower gear, at the same time dispelling the "knocking." Under normal running conditions the spark should be kept as far advanced as possible without causing a knock, this being conducive to a cooler running engine and more power. It will help, dealers and garage men will find, if they see that their customers are educated on the subject of variable ignition.

ELECTRICAL SYSTEMS SOLD

The Domestic Engineering Company have recently bought out, and are distributing through their agents, the Electrical Systems, Limited, something novel in the way of pumps.

This is a direct connected worm-driven pump, with a capacity of 350 to 375 gallons an hour, operated by a 1-4 h.p. motor.

One of the novel features of this pump is that it has a very small tank, containing only about 10 gallons of water, the idea being that the proper place to store the water is in its natural state, at the source of supply.

TRACTORS FOR FRANCE

Albert Prugh, Winnipeg representative of the Gray Tractor Company, was recently on a visit to the factory in Minneapolis. He states that the tractor business in the United States is booming, his company having recorded large sales in many districts. The Gray Tractor Co. has received an order from French agents for 400 tractors to be delivered at the rate of 40 per month.

HEADS G.M.C. OF CANADA

Toronto.—General Motors of Canada, Limited, is the name of the new and mammoth corporation recently organized with an authorized capital of ten million dollars. Mr. R. S. McLaughlin, president of the McLaughlin Motor Car Co., has been elected the president of this concern. Mr. McLaughlin was recently re-elected a director of the General Motors Corporation, a three hundred million dollar corporation in the United States. He is also vice-president of the same concern and a member of the executive committee.

As president of General Motors of Canada, Limited, Mr. McLaughlin will be head of this mammoth corporation.

LIMITED IMPORTATIONS

According to a notice published in "La France" of April 12, the French Minister of Agriculture has informed the president of the purchasing office for agricultural material that the limited importation of agricultural tractors will continue to be authorized until July 1, 1919, under import licenses, as at present. Licenses will be granted only for implements ordered by the purchasing office from foreign firms on or before the date of the announcement. After July 1, no licenses for the importation of agricultural tractors will be issued, if, as is expected, the French manufacturers are then able to supply the needs of agriculturists for mechanical traction implements.

IMPLEMENTS FOR ROUMANIA

Montreal.—The third steamer carrying Canadian supplies to Roumania, under the $25,000.000 credit extended by the Dominion to the energetic little Balkan country, left Montreal late in May. This is the "Tudor Prince," which carried binders, binder twine and general agricultural implements, and is chartered for a Danube port.

So far the Canadian Trade Commission has every reason to be satisfied with the despatch shown in the Roumanian orders, though the allocations necessary in the first shipments gave an enormous amount of work that taxed the staff to its utmost, because it involved a new class of work for which an organization had simultaneously to be built up.

The steamer "Jiul," which left Montreal, May 10, carried a cargo valued at $1,075,000, made up chiefly of binders, binder twine, wheat and farm implements. The consignment of binder twine alone took up 131,000 cubic feet.

The first vessel sent from Canada, the "War Siren," with a cargo of wheat valued at $558,000, has reported at a Roumanian port. The placing of the numerous subdivisions of the order under the Roumanian credits is being vigorously carried on by the Commission at Ottawa.

MONTREAL, P. Q.—E. R. Vadeboncoeur of the I.H.C., formerly blockman at Quebec, Que., has been appointed assistant to branch manager.

HAMILTON. — Negotiations have been under way for the sale of the National Steel Car Company to the American Car and Foundry Company, but no announcement has yet been made whether these have been completed. It has been rumored that the negotiations have been declared off.

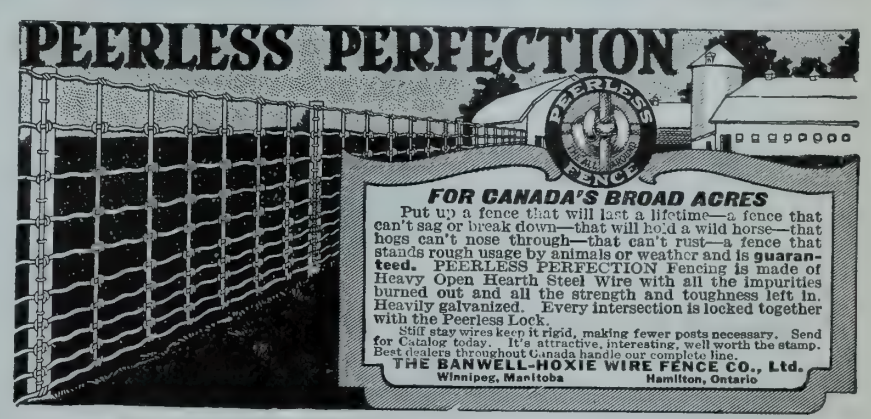
ST. JOHN, N. B.—A. S. Allen of the I. H. C., formerly assistant to branch manager at Hamilton, Ontario, has been appointed local branch manager, sucding L. P. Thayer.

SARNIA.—Within four months of moving into their new offices, John Goodison Thresher Company, Limited, has completed arrangements with distributors in fourteen different sections of the middle Western states. The Winnipeg Gas Engine and Tractor Company have been appointed distributors for Saskatchewan and Alberta. The Waterloo Boy Kerosene Tractor Company act as distributors in Manitoba with head offices at Winnipeg.

Non-Skid Tires
$14.75
Inner Tubes $1.90
WHOLESALE ONLY
Write for Copy of Motor Snaps. Thousands of Accessories
Write for Catalogue

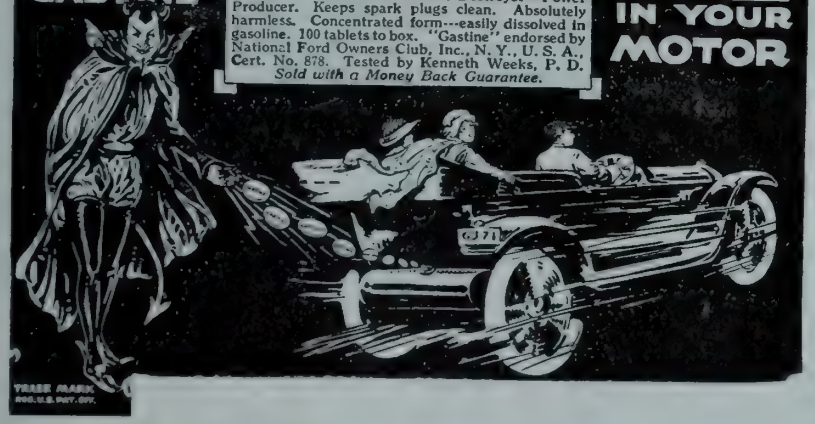
Crown Cycle & Motor Co. 319 Craig St. W. MONTREAL

PEERLESS PERFECTION



FOR CANADA'S BROAD ACRES
Put up a fence that will last a lifetime—a fence that can't sag or break down—that will hold a wild horse—that hogs can't nose through—that can't rust—a fence that stands rough usage by animals or weather and is **guaranteed.** PEERLESS PERFECTION Fencing is made of Heavy Open Hearth Steel Wire with all the impurities burned out and all the strength and toughness left in. Heavily galvanized. Every intersection is locked together with the Peerless Lock.
Stiff stay wires keep it rigid, making fewer posts necessary. Send for Catalog today. It's attractive, interesting, well worth the stamp. Best dealers throughout Canada handle our complete line.
THE BANWELL-HOXIE WIRE FENCE CO., Ltd.
Winnipeg, Manitoba Hamilton, Ontario

CUT DOWN YOUR GASOLINE BILL 30%
GASTINE
"Gastine" is guaranteed to give you 30 per cent more mileage, preventing formation of carbon, assuring easier hill climbing ability, faster ignition and greater power. A Gas Saver---Carbon Destroyer---Power Producer. Keeps spark plugs clean. Absolutely harmless. Concentrated form---easily dissolved in gasoline. 100 tablets to box. "Gastine" endorsed by National Ford Owners Club, Inc., N. Y., U. S. A., Cert. No. 878. Tested by Kenneth Weeks, P. D.
Sold with a Money Back Guarantee.
MORE "PEP" IN YOUR MOTOR



TRADE MARK REG. U.S. PAT. OFF.

Walter H. Flood, Chemical Engineer, in a Recent Letter Says

Gentlemen:—

I beg to submit herewith results of my examination and tests of GASTINE.

I find that it contains no alcohol, ether, camphor, picric acid, carbon bisulphide, nor other ingredient which might cause pitting or corrosion of the cylinder, or leave a gummy residue.

To determine what, if any, action GASTINE would have on metals, pieces of copper, iron, steel, zinc, nickel, silver, gold, platinum, brass and aluminum were treated with it both in the cold and under heat, and none of the metals were affected in any way.

On actual engine tests, using a 24 horsepower four cylinder automobile motor, gasoline containing GASTINE according directions gave 16.7% more power with 11% less fuel consumption, than untreated gasoline. With equal fuel consumption this would mean over 31% more power, and consequently an increase of more than 31% in mileage. After making the tests, the cylinders showed an oily surface with no evidence of carbon which was present before the tests were made.

I have examined many compounds of this kind, and from my experience GASTINE is the only one which possesses all of the desirable features with none of the defects.

Respectfully,
WALTER H. FLOOD.

WHF/CC

A MONEY MAKER
for Motor Dealers
"GASTINE"
THE GASOLINE ECONOMIZER

"Gastine" is a product that motorists have felt the need of for years. It is equally effective in use with AUTOMOBILES, TRACTORS AND STATIONARY ENGINES. It is a rapid and easy seller, requiring no experience to handle.

"Gastine" is mixed directly with the fuel and can be used with every kind of gasoline or kerosene engine. The tablets are placed in the tank, one to each gallon of fuel. Being soluble, they quickly dissolve and cannot in any way stop or clog the feed pipe.

"Gastine" is guaranteed non-injurious—(tested by Milton-Hersey & Co., Ltd.)

"Gastine" is endorsed by the National Ford Owners' Club, Inc., N.Y., U.S.A. Certificate 878.

AGENTS WANTED WRITE FOR PARTICULARS TO

EVANS & CO., Coristine Bldg.
MONTREAL - - CANADA

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

IS

A CANADIAN COMPANY offering service of interest to and in the interest of Canadians.

Time payments made possible and profitable for Manufacturer, Dealer and Customer. Of particular interest to Automobile and Musical Instrument Trades.

LET US KNOW YOUR REQUIREMENTS

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

Bank of Hamilton Building, Toronto, Ontario
McArthur Building, Winnipeg, Man.

WE GIVE

"Quality and Service"

IN

TRACTOR and TRUCK STEEL CASTINGS

JOLIETTE STEEL CO., LIMITED

903 Read Building, Montreal
JOLIETTE, P.Q.

Profit for Dealer and User

The reputation which Peter Hamilton farm implements have gained for themselves is sufficient guarantee that the dealer who handles them is going to make money.

Our implements are constructed to stand the heaviest work and farmers everywhere find perfect satisfaction in

Peter Hamilton Farm Implements

The outlook is favorable for a big demand of our products. We manufacture spring tooth and stiff tooth cultivators, scufflers, harrows, mowing machines, rake blowers and cutters.

Now is the time to write for territory. We need more good dealers.

The Peter Hamilton Co. Limited
PETERBORO - ONTARIO

ANOTHER BANQUET

"Canadian Motor, Tractor and Implement Trade Journal" is the name of a new publication being issued by that well-known house, the MacLean Publishing Co., Ltd., Toronto. This magazine will serve the wholesale and retail trade in the fields indicated by its title. It is well made up and the initial numbers contain topical and informative articles. We welcome our Eastern contemporary to the farm machinery trade field of the Dominion, wherein lies abundant opportunity and a wide variety of subjects to cover, from both the technical and commercial viewpoints.—*Farm Implement News, Winnipeg.*

HUGE RUSSIAN LOSSES

Chicago.—The International Harvester Company's earnings for 1918, as shown by its annual report covering the operations of the merged companies, were slightly above the combined earnings of the two companies in 1917. The 1918 profit is $14,985,000, as against a combined profit of $12,659,000 last year. This profit represents a return of less than 7 per cent. on the net investment in the business, or a profit of about 11 per cent. before deducting $10,478,000 charged off for war losses, due to further depreciation of assets in Russia.

The Russian factory at Lubertzy, near Moscow, was still running at last reports under the management of the Company's Russian representatives, nearly all the American employees having been forced to leave the country by the end of 1918. Most of the Russian branch houses have been closed, but a few are still operating under the management of American employees. The directors specially commend the courage and fidelity of the Company's Russian organization in the face of great hardship and peril.

Russia's deepening disorder compelled further re-valuation of Harvester assets there. For that purpose $10,478,000 was charged off against the year's earnings, making the total depreciation to the end of 1918, $24,205,000.

Concerning the "Harvester Industrial Council Plan" of employee representation, adopted in March, and now in full operation at nineteen of the twenty plants in the United States and Canada, the report says:

"One or more meetings of the Works Councils have been already held at each of these plants, and some important matters, involving wages, hours of labor and working conditions, have been discussed. The early results indicate intelligent acceptance and fair-minded use of the plan by employees as a practical means toward industrial betterment and continued industrial peace."

SHIP TRACTOR BY EXPRESS

Wm. J. de Greeuw, of 27 Regent St., London, England, early in May, ordered the Scientific Farming Machinery Company of Minneapolis to forward by express a full-sized "Once-Over" Princess Pat Tractor. It is figured the express bill on this tractor will be fully two-thirds of the total price of the machine. The urgency of the shipment arose from the sudden decision of the British Implement Association to hold a Tractor Show in London. Mr. De Greeuw is the London resident agent for the foreign distributors of the "Once-Over." The tractor was shipped completely set up and containing gasoline and oil.

TRACTORS PULL BONES

Washington.—The caterpillar tractor will start soon for the "farthest north." Four tractors will be shipped to the Pribiloff Islands to assist in hauling fossil seal bones to the coast to be shipped to the United States to be made into fertilizer. A deposit of bones one and one-half miles long and one-half mile wide has been discovered, surrounded by sand impossible for autos or horses. Seattle firms offer $14 a ton.

Maybe Adam Laughed at These!

Too Late—An Ohio man has invented a doorknob which, when grasped in the hand, illuminates an electric bulb placed just above the keyhole.

Cleanliness and Hole-i-ness—"I told you not to make me take a bath, ma. Look how plain that hole in my stocking shows now."—*Judge.*

All Books Are Not So Dry.—Card from a local freight agent to a studious citizen:

"Sir—Please send, without delay, for the case of books directed to you, which is lying at the station and is leaking badly."

Must Spray It.—Five-year-old Elsie was looking at a recently bereaved relative who wore a wide band of black cloth on one sleeve of his overcoat.

"Mother," she whispered, excitedly, "what does Uncle John do to keep the bugs from crawling up his other arm?"

A Good Report.—Mr. Jones, the auto accessory man, was looking over the credit sales slip one day. Suddenly he called to the new clerk. "Did you give Wm. Wilson credit?"

"Sure," said the clerk.

"Didn't I tell you to get a report on any and every man asking credit?"

"Why, I did," retorted the clerk, who was an earnest young fellow. "I did get a report. The agent said he owed money to every accessory firm in town, and, of course, if his credit was good, I knew that you would like to have him open an account with you."

—*Western Canadian Motorist.*

Rough-on-Trains.—A well-dressed lady rushed up to a clerk in the household goods department of a New York store, and, without giving the clerk a chance to ask what she wanted, exclaimed: "Give me a mousetrap, quickly, please, because I want to catch a train."

—*Collier's.*

An Excellent Provider.—"Have you got any of this yur White Lightning liniment?" asked a citizen from out on Fiddle Creek, of a salesman in the Palace drug store at Tumlinville, Ark. "My wife's rheumatism is pestering her powerful, and——"

"But that is horse liniment."

"Well, gimme a bottle of it. Noth'n's too good for my wife, by cracky!"

—*Kansas City Star.*

Short and Sweet.—In an employment bureau of a large industrial concern the other morning an applicant filled in his application blank as follows:

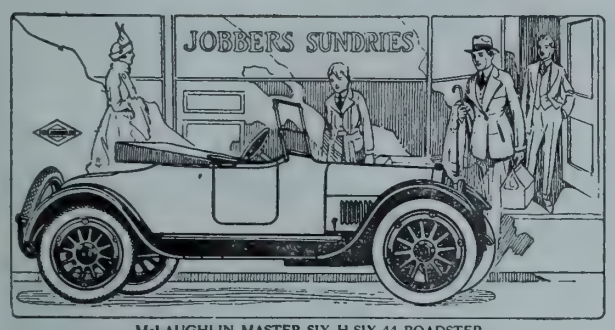
Name—Antonio Glionna.
Born—Yes.
Business—Bum.

Adv. in English Paper.—"Wanted, youth to milk and wash motor car."

They Never Knew the Motorless Age.—Even the children are beginning to talk motor jargon. "Look, mother," said a little fellow pointing to a hole in his stocking, "I've had a blowout." A little girl being asked how she managed to catch a chicken replied, "I just runned him till his gas gave out an' then I picked him up." A third youngster who was usually slow in obeying his mother's call came quickly enough when she called him to dinner. On her pointing this fact out to him, he said: "Oh, I always change to high when I come to meals."

No Free Feeds.—Dave Lewis begs to notify that he has started business on his own hook as an up-to-date restaurant, and hopes that his many friends will dam well stop away and give him a chance.—*Rural Weekly.*

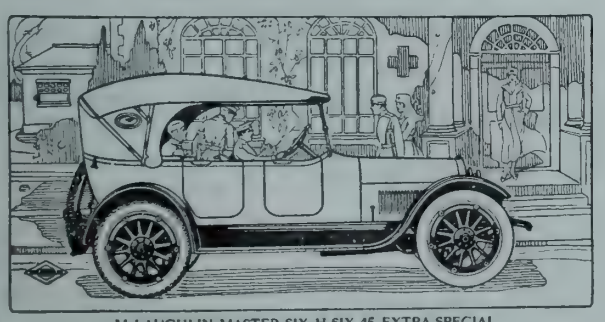
McLAUGHLIN CARS
IN NATIONAL SERVICE



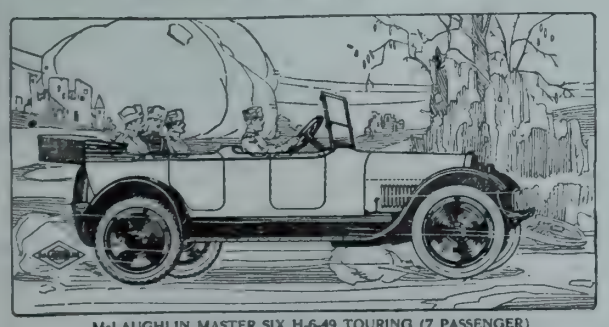
McLAUGHLIN MASTER SIX H-SIX-44 ROADSTER
(The H-Six-44 Special is a replica of this model with Special Appointments)

McLAUGHLIN MASTER SIX H-SIX-45 SPECIAL TOURING
(The H-Six-45 Regular and the H-6-45 Extra-Special are mounted on same Chassis as H-Six-45 Special)

McLAUGHLIN MASTER SIX COUPE H-SIX-46



McLAUGHLIN MASTER SIX H-SIX-45 EXTRA-SPECIAL



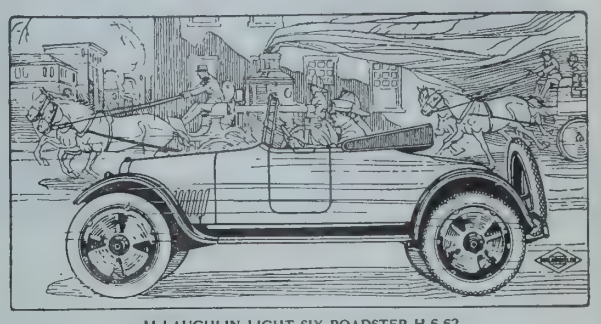
McLAUGHLIN MASTER SIX H-6-49 TOURING (7 PASSENGER)
(This Model is being used by Siberian Expedition)

The McLaughlin franchise in any community is a most valuable asset for the live wire automobile dealer.

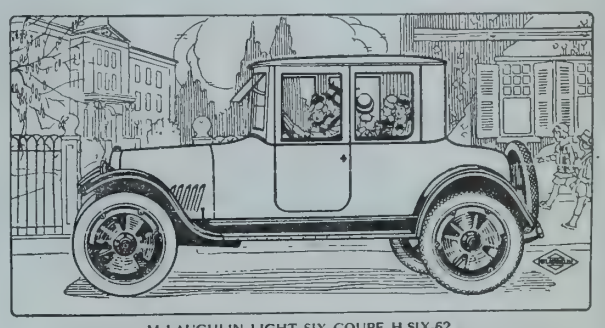
This is due to the fact that McLaughlin cars have an established reputation for power, speed, beauty and efficiency and are, without a doubt the most popular Canadian made cars to-day.

For next season the McLaughlin models are more attractive than ever. If you are a progressive automobile dealer in a territory where we are not well represented, write us for details of our selling agreement for 1919-1920 selling season, addressing your communication to the

Sales Manager



McLAUGHLIN LIGHT SIX ROADSTER H-6-62



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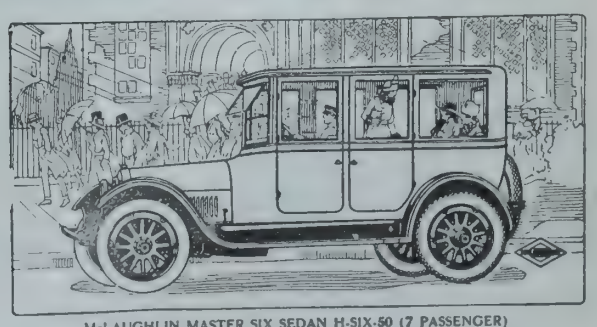
McLAUGHLIN LIGHT SIX TOURING H-SIX-63

McLAUGHLIN LIGHT SIX SEDAN H-SIX-63



McLAUGHLIN MASTER SIX SEDAN H-SIX-50 (7 PASSENGER)

BRANCHES AT
ST. JOHN, N. B. TORONTO, ONT.
MONTREAL, QUE. HAMILTON, ONT.
BELLEVILLE, ONT LONDON, ONT.

DEALERS EVERYWHERE

The McLaughlin Motor Car Co. Limited
OSHAWA, ONTARIO

BRANCHES AT
VANCOUVER, B. C. SASKATOON, SASK.
EDMONTON, ALTA. REGINA, SASK.
CALGARY, ALTA. WINNIPEG, MAN.

DEALERS EVERYWHERE

MADE IN CANADA

BUFFALO OILS

Quality Oils for Every Farm Purpose

You cannot get the best results in your machinery operations unless you use **quality** oils and greases. The quality of BUFFALO OILS has been thoroughly proven —they are Western Canada's favorite brand.

There's a Buffalo Oil or Grease to meet every requirement of the farm. Put them to the test.

BUFFALO OILS INCLUDE

Automobile Oil	Gasoline Burning Oils
Tractor Oil	Transmission Greases
Gas Engine Oil	Cup Grease
Steam Cylinder Oil	Crank Pin Grease
Machine Oil	Graphite Grease

PRAIRIE CITY OIL CO., LIMITED
Winnipeg - Manitoba

GRINDERS FOR TRACTOR POWER

"RAPID-EASY" GRINDERS

have set and are constantly maintaining a distinctively high-quality mark.

The Best for Your Trade

STYLE "D" CUSTOM MILLS

are particularly well adapted for Tractor Power. Four sizes.

$9\frac{3}{4}$ in. $10\frac{1}{2}$ in. 11 in. 13 in.

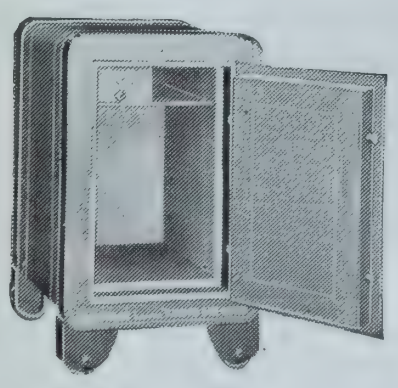
Compared with other Grinders and tested for Operating Efficiency---number of days of active service.

The "RAPID-EASY" is AN EASY WINNER

Write for Illustrated Folder

MOST WORK, LEAST POWER, BEST QUALITY

J. FLEURY'S SONS
Aurora, Ont., Canada



Safety First!

Don't leave valuable papers and documents lying about the house, where they can be stolen, burned or mislaid.

Put them in a real Made-in-Canada, fire-resisting steel cabinet, with combination lock. No needless searching for what you want. Everything right to hand.

This is a splendid opportunity for implement dealers. Write for prices and full particulars at once.

Security for your Victory Bonds, Sales Notes, etc.

J. & J. Taylor, Limited
TORONTO SAFE WORKS
Toronto, Canada

Dairy *and* Household Supplies

SELLING WATER SUPPLIES

MANY a farmer would be glad to put in a water system in his house, if he could see the way to do it illustrated in some store window or some well arranged shop wall. If he could buy the various pipes, pumps, sinks, taps and connections and be told where he could get expert advice in its erection where plumbing was needed, many sales would be made without much salesmanship talk. That dealer is the most successful who carries a little humanity under his clothes and knows that he has a genuine interest in making people better.

BUILDING WASHER TRADE

The advantages resultant from operating washers with power are so obvious that power washers have become popular throughout the country. The housewife who resides in the country finds that a small gas engine offers economical and easily controlled power for operating washer and wringer. Housewives who live in the country are known as good buyers, as they are usually well supplied with the money they receive from eggs and other produce. It is only logical that high-priced produce has increased their buying power, so they are not only willing, but anxious, to purchase machines to lessen the usual drudgery of wash day.

The dealer who sells washing machines should by all means carry a complete line of wringers, for good wringers are essential to the success of home laundries. Modern ball-bearing wringers have many points of merit, their chief recommendation being that they remove most of the water from clothes without tearing or otherwise injuring the finest fabric.

After selling a washing machine it is a good plan to offer the customer a few suggestions regarding its proper care. The best washer manufactured will not prove satisfactory for any length of time if it is not given reasonable care. It is not uncommon to see a washer sitting out in the sun, where the wind and other atmospheric agents warp and rot the wood work and rust the metal parts. A washing machine should be kept in a weather-tight building the same as any other valuable piece of equipment.

It is a poor policy to put too many clothes in the washer at one time, as they cause a heavy strain on the mechanism. Best results are produced by washing moderate amounts of clothing at a time and through the use of plenty of water.

Proper adjustment of the washing machine is a point sometimes overlooked by the operator. With continued service some of the parts may work loose; this is why it is advisable to go over the machine occasionally, tightening bolts, screws, etc. Proper adjustment of the machine prevents wear and tear, and it operates much easier when all parts are held firmly in position.

DEMONSTRATION PAYS

A few demonstrations and some well-directed advertising in the local papers bring good results in creating interest in washing machines. One successful dealer occasionally designates a day for demonstrating power washers. An announcement is made in the papers. At this time the machines are set in action and their operation explained. Some times clothes are actually washed. Everyone coming into the store on this day is invited to look at the washers and if at all interested to take a booklet with them to study home. The names are taken of all those who show any interest in the machine. This serves as a basis for a live list of prospects, and in a few days, a letter is sent out to everyone on the list, followed by another about a week later if the first brings no response. The cost of these letters need not be much, since a plain multigraphed letter or a printed one usually answers this purpose as well as a more elaborate one. If the dealer referred to above gets no response from the first two letters sent out, he sends a third, or has a salesman call the prospect by telephone and inquire if there is anything about the washer that is not fully understood, at the same time suggesting that the prospect call and see the machine again.

The small gasoline engine and the unit electric plants have brought power washers to the front, and the implement dealer who has familiarized himself with different kinds of power machines will find the power washer a convenient addition to his line. He will already understand its principles of operation and with small effort can acquire the mechanical points necessary for a good sales talk. Some manufacturers have found dealers cautious about taking on a power washer priced at $75 to $100 or $125 on the ground that the farmer and wage earner will refuse to pay this price. Judging from the experience of dealers who have made a success of selling power washers, the matter is chiefly one of educating the prospect to the higher price.

NOVEL COLLECTION SCHEME

Out in the West there is a successful live wire dealer who makes things go by his new methods and emergency suggestions, says an exchange.

In locking over his books he found that there were 300 farmers being carried on his books, with accounts ranging from one dollar up to a hundred dollars, total, perhaps, of $2,500. Now, if he could get all of these people to pay up, and at the same time stimulate new cash sales of the same amount, this would make a total of five thousand dollars' worth of business, and a washing machine given away would be about the same as a one per cent. discount for cash. He resolved to try it.

He procured a cut of a well-known power washer, and had his local printer print the illustration on 500 of his regular statements.

At the bottom of the statement he printed the following notice:

"A Quicker Yet power washing machine to be given away absolutely free. It's rather hard to believe that this power washer is to be given to someone absolutely free, but such is the case. Here is our plan: With every cash purchase of $1.00, or with every dollar paid on account, we will give you a coupon which entitles you to a chance to win this machine. There are no strings attached; just pay your account and for every $1.00 you get a coupon, or pay cash for your purchases and you get the coupons.

"This is one of the best Power Washers made and will bring joy to any household receiving it. It will mean the end of wash day drudgery.

"Pay your account and get coupons."

Beginning Early

"Dad," said a little maid of twelve summers, "every morning when I am going to school the boys catch hold of me and kiss me."

"Well, Ethel," replied dad, looking up from his newspaper, "why don't you run away from them?"

Ethel fidgeted and cast her eyes down on the carpet.

"I did one morning," she said hesitatingly, "and they—they didn't chase me." —*Tit-Bits.*

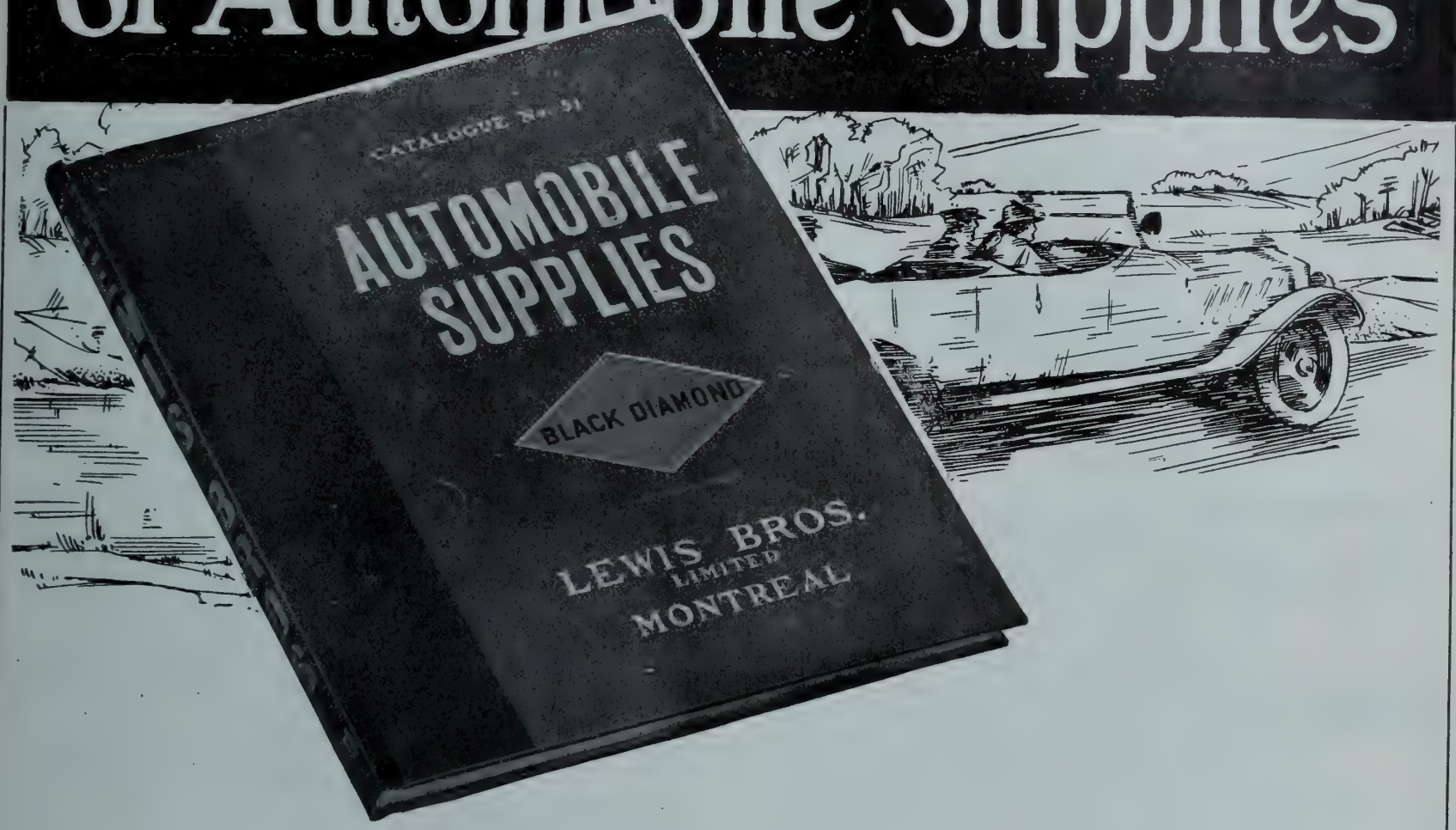
* * *

Define Marriage

"What is marriage?"

"Love parsonified."

Send for this Book of Automobile Supplies



THIS catalogue was built with the intention of making it of the greatest possible assistance to dealers in making up their Mail Orders.

You will find that every article and every illustration in it is exactly true to the goods it represents.

Mr. Dealer: Be prepared for big business---send for this FREE Catalogue today.

TEST OUR SERVICE. We ship mail orders promptly and charge you reasonable prices.

LEWIS BROS, Limited
MONTREAL

Automobile Supplies

Automobile Supplies

"NIAGARA" ACCESSORIES

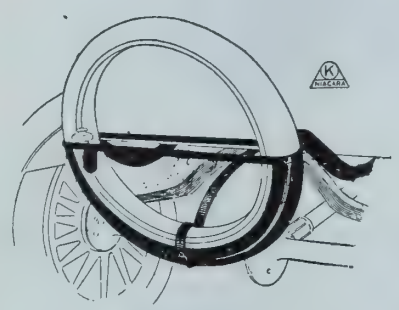
"Niagara" Jacks
Six good models

"Niagara" Pumps
Efficient and durable
Chrome leathers used throughout

"Niagara" Bumpers
Every Niagara Bumper is built with shock-absorbing springs

"Niagara" Tire Carriers
The Best Yet!

"Lyon" Resilient Bumpers
Saves the car without spoiling the bar

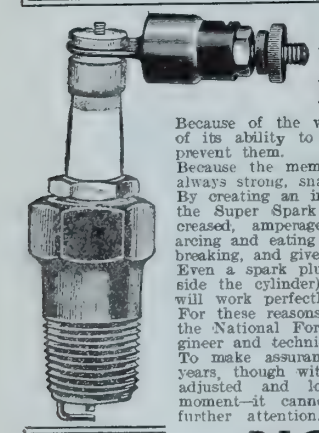


For Satisfaction

Specify "Niagara" Brand to your jobber; or write direct to the manufacturers.

Kinzinger, Bruce & Co., Limited

Niagara Falls Canada



IN POSITION

Why does the National Ford Owners Club of New York recommend the Super Spark?

Because of the very definite and convincing proof which the Super Spark has given of its ability to put an end to spark plug troubles. Not only to end them, but to prevent them.

Because the members of the club have found that the spark of the Super Spark is always strong, snappy and uniform.

By creating an impulsive rush of high pressure current which surges across the spark, the Super Spark increases voltage and decreases amperage. When the voltage is increased, amperage is decreased, thereby diminishing the heat that causes cracking, arcing and eating away of the points. It also prevents the porcelain from cracking and breaking, and gives a steadier, brisker and livelier spark.

Even a spark plug that is flooded with oil, one that is wet all over (inside and outside the cylinder) or one the spark of which is choked all up with carbon deposits, will work perfectly when equipped with Super Spark.

For these reasons, and others equally sound, the Super Spark carries the approval of the National Ford Owners' Club of New York as well as that of every qualified engineer and technician who has tested it.

To make assurance doubly sure we guarantee the Super Spark unreservedly for two years, though with ordinary care there's no telling how long it will last. When once adjusted and locked in position—it only takes a moment—it cannot get out of order and needs no further attention.

THE SUPER SPARK

NO MORE ENGINE MISSING
MORE NEW PLUGS
MORE CLEANING PLUGS
MORE CARBONIZED PLUGS

Prices, $2.25 each; or $9.00 for a set of 4.

Super Spark Company of Canada 44 SIMCOE STREET OSHAWA

Eastern Distributors: Vlit Mfg. Co., 223 McGill St., Montreal
Western Distributors: Shell Supply Co., 509 McGreevy Bldg., Winnipeg, Man.

Exclusive representatives wanted for counties and townships

SPECIAL OFFER!

This ad and $1.50, mailed or presented to our Oshawa office only, entitles you to one only Super Spark with full instructions.

Shaw's Auto Salvage Parts Supply Co.

923-927 Dufferin Street, Toronto

PHONE JUNCTION 3384

An efficient service intelligently rendered on all used parts.

GEARS, MAGNETOS, RADIATORS, SHAFTS, SPRINGS, CARBURETORS, BEARINGS, LAMPS, WHEELS

"ALL SERVICEABLE" *NO JUNK*

Correspondence Solicited. Inspection Invited
Prompt Deliveries. Money Back Guarantee. No advance in Our Prices.
Largest Stock in the Dominion. No sending of Wrong Parts is convincing enough for you to *Wire, Write or Phone*

Shaw's Auto Salvage Parts Supply Co.

923-927 Dufferin Street, Toronto

PHONE JUNCTION 3384 K-13

Accessories and Parts

BUSINESS IS COMING

New firms are coming into the Canadian field all the time, says T. K. Nelson of the Splitdorf Electrical Co., of Toronto. The attraction in Canada for business in trucks, tractors and stationary engines is so good that several new firms are locating here, and old ones are expanding their lines.

DEALERS STILL CAUTIOUS

Mr. Rogers, of the Canadian General Electric, says that all their lines show increased sales but this is due to their pushing of the business, as dealers are still very cautious as to large buying orders. The man who is getting the money is the one who is on the job all the time.

STEADY TRADE COMING

"The accessory trade is going along with an even keel." says Hyslop Bros., of Toronto. "We are now finding a steady trade in all lines of accessories due to our past persistent advertising policy. We are now reaping the results and trade is good."

SNUBBERS ARE IN DEMAND

A Toronto dealer reports an active inquiry for Gabriel Snubbers for Ford one-ton trucks and other light cars. The consumer is finding out that the snubber is not only a saving on the car and the load but a very great saving on springs, and the demand is on the increase.

IGNITION FOR THE TRACTOR

The demand from users of the Ford tractors for a high tension magneto ignition has led to the Bosch Ford tractor attachment that can be fitted to the Ford, that becomes a permanent part of the engine and provides remarkable efficiency.

STATIONARY GAS ENGINES

For the ignition of small gas, gasoline or oil engines of the so-called farm type, the Columbia Multiple Battery makes big claims for a source of current. Storage batteries are out of the question, wet cells are too inconvenient, and magnetos are not only expensive, but, should they fail, a delay of days, often weeks. ensues before they can be sent to the factory, repaired and shipped back.

A set of individual dry cells is often used. but with the make and break spark coils most commonly supplied with these engines, a rather heavy current is necessitated. For a short time a single set of cells would not be seriously injured, but the engine is often used for some such service as pumping, where it runs continually all day. The effect of this would be to weaken a set of cells very materially, whereas a Multiple Battery would be unaffected. In general the life of a Multiple is from four to five times as long as that of a single set of cells and will prove economical for this service.

TRANSMISSION CLAMP BAND

A clamp band to hold Ford transmission bands in position while replacing the transmission cover is sold for 30 cents. It is made of spring steel of exact dimensions and is clamped around the lugs of the transmission bands and removed after the cover is in place.

STANDARDIZING PARTS

The value of the war time eliminations schedule for grain drills and seeders in the U.S. has not been lost. The National Implement and Vehicle Association with slight modifications has continued this policy in effect. The manufacturers realize that while war conditions clearly demonstrated the great need of reductions of unnecessary variety of sizes, styles and kinds of equipment, the same eliminations in normal times involve valuable and practical economies of benefit to manufacturers and consumers alike.

A QUEER ACCESSORY DEAL

The vagaries of the accessories business are well illustrated by the experience of one Toronto firm last year. A certain accessory which promised to be in great demand during last year was heavily stocked early in the year. Strange to say the call for this accessory proved disappointing and at the end of the season, most of the stock remained in the dealer's hands. Upon placing their predicament up to the manufacturer they were informed that the costs of manufacture of this particular accessory had gone up and they would be glad to buy all the surplus stock back at an increase over cost to them.

"You can never dope out your business beforehand," said the Toronto man. "There is always the unexpected and the unknown popping up. This year there's a big demand for this line, and *we haven't got it.*"

SYSTEM SELLS MOST

Some men are more successful in selling goods than others. The difference is usually represented by a definite system. Hit and miss merchandising is productive of random results.

Keep a well-assorted stock. Choose complete lines rather than little dabs of this, that or the other. Arrange stock so it can be easily shown and the customer can be given a comprehensive idea of what you have. See to it that each clerk understands perfectly the advantages and disadvantages of all goods offered. Try to find exactly what the customer wants so that the goods will stay sold and give satisfaction.

THE PLOW MEN'S PROBLEMS

One of the plow manufacturer's big problems is to make a moldboard with such a shape that it will turn the furrow slice, one particle on the other, and pulverize it, so that one can almost take the furrow slice and loosen it up with one's hands. so that it is generally speaking mellow. Sometimes by using a wrong bottom, a stubble bottom, say, when we should use a general-purpose bottom, the work of plowing, the quality, is really affected; and those are problems that the plow man has to meet.

The centre line of draft on plows is a thing that is very often talked about as being a mystery. Most men who work with plows have assumed that the centre line of draft on a plow is about two inches inside of the landside of the plow, and in the same proportion on two, three and four-bottom units. Some tests were made this summer by Dr. E. A. White, of Illinois, who has done a good deal of work on plows, to find the centre line of draft on a plow; in other words, to determine the point of least resistance. It was found that the hitch, when it was bad, had a draft of 1,800 pounds on a four-bottom plow. That same plow hitched on the other side had a draft of 2,395 pounds, which means an increase in draft of 44 per cent. Another case showed the decrease in draft due to the good hitch and the bad hitch to be a trifle over 30 per cent.

A great many farmers have their minds made up as to the make of the accessory they want. The national advertising has made your sale easy.

Made in Canada

DIXIE "ACE"

Brings

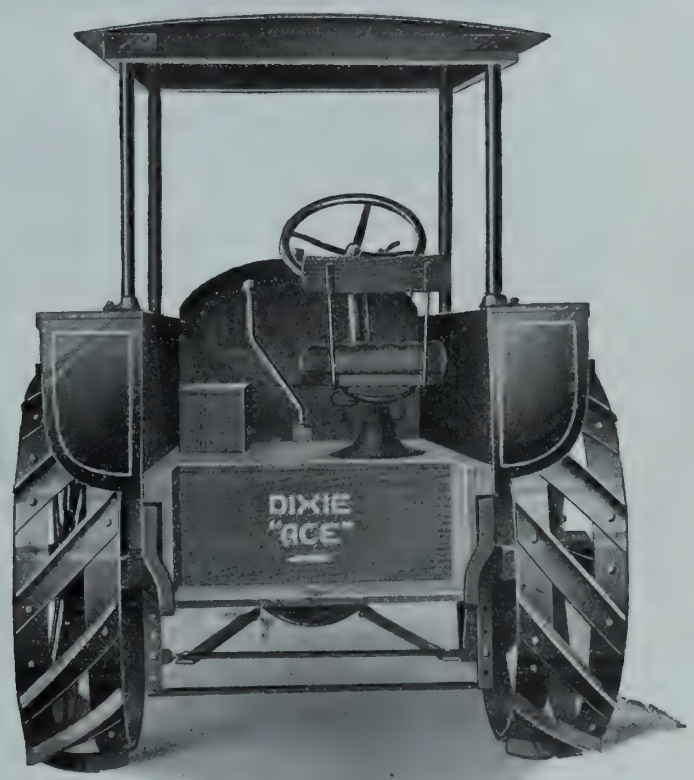
Dollars to Dealers

Everyone is talking about the DIXIE "ACE"—it is the "Latest and Greatest Tractor Success." It sells easier, because it fills the requirements of the average farmer better than they have ever been filled before.

The neat, graceful lines—compact, sturdy construction—and startlingly sensible service features appeal to the ordinary average farmer—the hundred-acre man, who forms 98% of the farming community. Every farmer is a prospect for a DIXIE "ACE."

The DIXIE "ACE" weighs 3,350 lbs.—has a 69" wheelbase—a speed range of 1 to 6 miles—all gears entirely enclosed running in oil—wonderfully efficient drive wheels of new and exclusive design—comfortable cushion seat and roomy covered cab—plenty of power for any farm—and the price is so reasonable that there is hardly a farm in Canada on which it would not be an investment paying the highest dividends.

Turn this over in your mind—why shouldn't you be the man to reap this golden harvest? If you are an aggressive dealer, of good local standing, write us TO-DAY. Act quickly as the season is just starting.



GILSON ENGINE

"Goes Like Sixty"

Are you making as much money out of your engine sales as you should? Are you selling as many engines as you should? Let us show you how to increase your engine sales and your Bank balance. Write to-day for our agency proposition.

SILO FILLER

The Wonderful Gilson

The lightest running Blower Cutter made

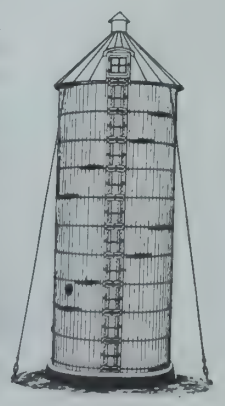
The supremacy of the Gilson Silo Filler is unquestioned. It does what has heretofore been considered impossible. Do not be satisfied to sell a substitute and only get a fraction of the silo filler business from your territory. Write for our special free sample plan whereby you can get all the silo filler business in your locality—and there is probably a great deal more available than you realize.

HYLO SILO

The Mortgage Lifter--

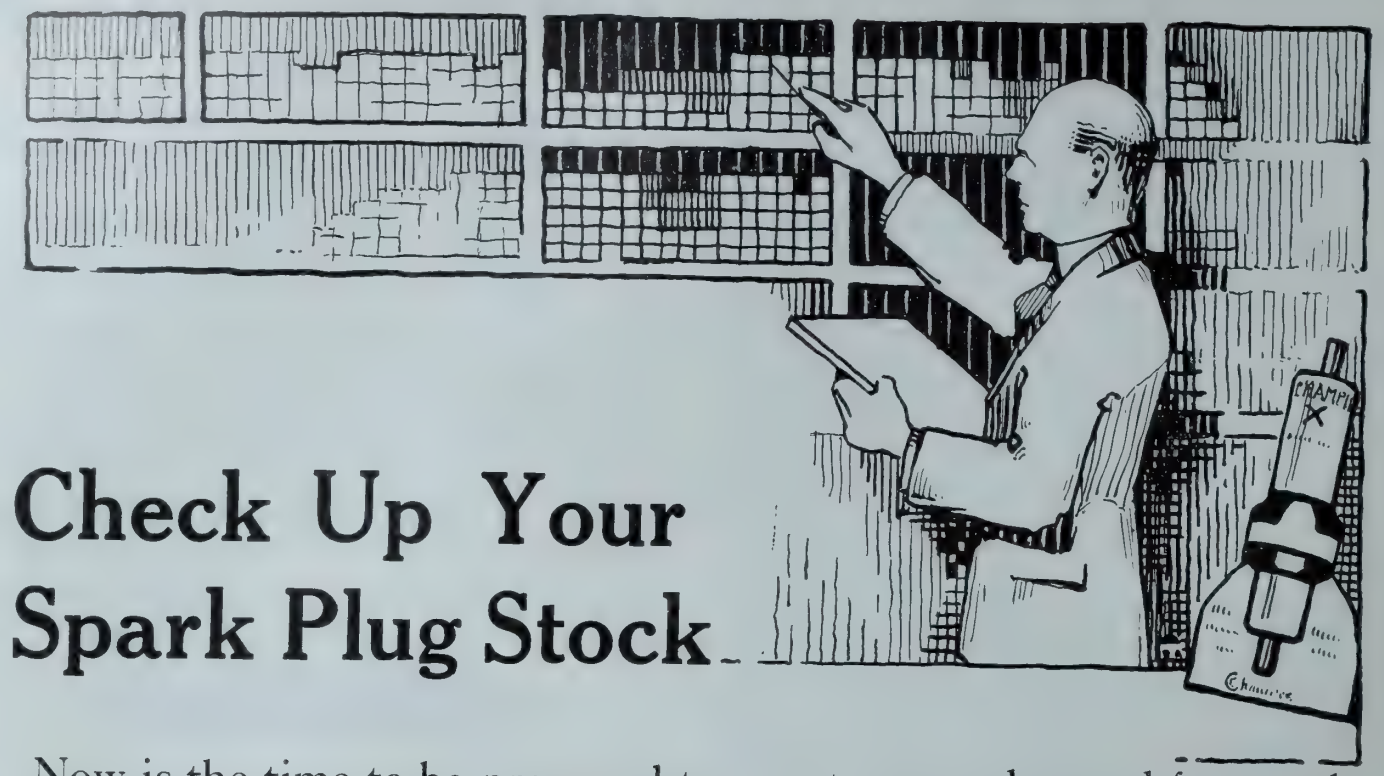
The Money Maker

The "Hylo" is different and distinctly superior to any other silo. The hoops automatically expand and contract with the silo—patented, combination door lock and ladder—reinforced door frame—positive anchoring system—our own wonderfully fine grade of Imported Long Leaf Yellow Pine is used. Your customers want the "Hylo"—sell them what they want and make more money.



GILSON MFG. CO., Limited,

Dept. A, - GUELPH, ONT.
Dept. AA, WINNIPEG, MAN.



Check Up Your Spark Plug Stock

Now is the time to be prepared to meet every demand for spark plugs. Motor car registrations have reached a new high level—more motor trucks are being employed and more tractors and gas engines requiring spark plugs are in use than ever before.

Champion

Dependable Spark Plugs

are factory equipment on four out of every five gasoline motors in use. This is significant of the dependability of Champions. They are selected by those experts who develop automobile engines to give the highest efficiency at the lowest cost.

Champions with 3450 "Plus Service" Insulators and patented compression-proof gasket construction are the spark plugs your customers will insist on having for replacements. Our advertising is educating them to know their efficiency and dependability. Champions are guaranteed to give

"Absolute satisfaction to the user, full repair or replacement will be made." There's a Champion plug for every type, and

make of motor. Be sure you have the full line. It will not only build your spark plug business, but will increase your sales of other lines as well.

Check up and order from your jobber now.

Champion Spark Plug Company of Canada, Limited
WINDSOR, ONTARIO

Massey-Harris

Through Haying Without A Hitch

It is a great satisfaction to know that the goods which you sell, really prove an invaluable aid to your customer, and go through the season's work, leaving him satisfied.

This is the experience of those dealers handling the Massey-Harris Line of Implements.

Getting in the hay this year, in its best condition and without danger of having it spoiled by unfavourable weather, will necessitate the use of reliable Haying Tools. Implements that get the hay in quickly and with the minimum of labour, and that line of haying implements is the Massey-Harris,—the kind that go through Haying without a hitch, and leave the field clean.

The line being complete, including Mowers, Tedders, Rakes, Side Delivery Rakes, Loaders, and Wagons, assures the farmer of the one quality throughout, and the sale of one machine prepares the way for others.

Our Advertising of this line is in all the Farm Journals, and every farmer will think Massey-Harris when he thinks of an implement for haying, so here is your opportunity to make

The Haying Season Your Big Harvest

MASSEY-HARRIS CO., LIMITED

HEAD OFFICES—TORONTO, ONT.

Branches at

Montreal, Moncton, Winnipeg, Regina, Saskatoon, Swift Current, Yorkton, Calgary, Edmonton. *Transfer Houses*—Vancouver and Kamloops

This is the Plant
a Farmer Really Needs

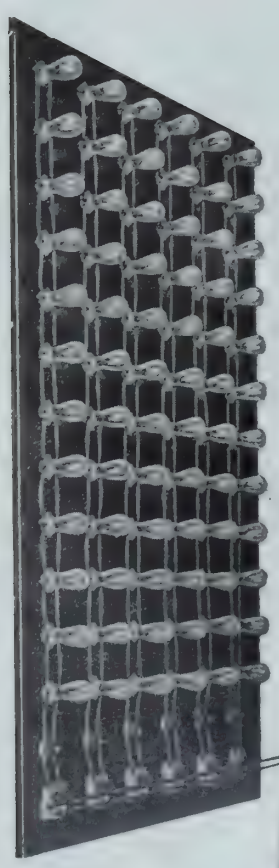
ANY one can see that the Phelps is a practical power and light plant. It is big enough to carry the load that a farmer has to put on his plant. 1500 watts! That means about twice the actual capacity of ordinary lighting plants. But the Phelps doesn't run into twice the money—nor anything like it. It can be sold at very little more than the small-capacity plants on the market.

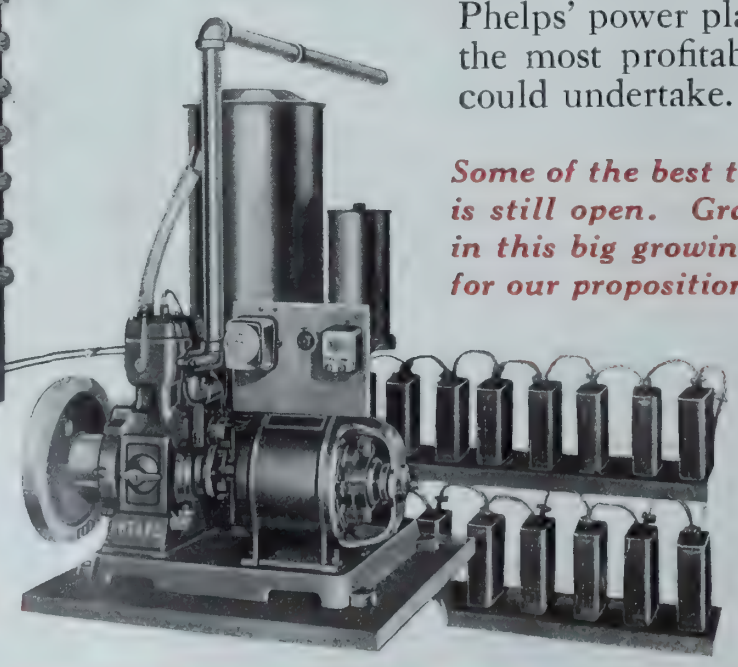
This is a proposition that will make fortunes for live agents in the next few years

DON'T forget that farmers are making money. They can afford to improve their homes. They are going to have comforts and conveniences that were available only to city people a few years ago. The business in electrical equipment—lighting and power plants—is big even now. But it is just started.

Once the idea gets across—and our advertising will put it across—the business of selling Phelps' power plants will be one of the most profitable lines an agent could undertake.

Some of the best territory in Canada is still open. Grab it. Get a start in this big growing business. Write for our proposition.





72--twenty-five Watt Lamps--1800 Watts proving the over-load capacity of the Phelps

What the Phelps Will Do

Operate 75 — twenty watt lamps. Run every household electrical convenience. Washing machine and dozens of other labor savers.

Run churns, cream separators, milkers and other farm machines.

Supply power direct from the engine.

Operate a "Westco" pressure Tank Water System for bathroom, kitchen and farm biuldings.

Give double the lighting and power capacity of the ordinary machines on the market.

GRACE MOTORS LIMITED
EXPORT MANAGERS
243-255 Queen St. East, TORONTO

MANIFOLD LIGHT AND POWER LIMITED
240 Main Street, Winnipeg
DISTRIBUTORS FOR WESTERN CANADA

Grace Motors, Limited, are Canadian distributors for Sterling Trucks, Fulton Trucks, Atlas Trucks, Smith Form-a-Truck, Lay Porta Power, Lay Farm Equipment. Arnold Electric Tools, Veeder Odometers. Non-Gran Bearing Bronze.

PHELPS Power and Light Plant
"The BEST is always the CHEAPEST"

CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Published Monthly by THE MACLEAN PUBLISHING COMPANY, LIMITED, TORONTO

MONTREAL, Southam Bldg. WINNIPEG, 1103 Union Trust Bldg. VANCOUVER, 39 10th Ave. West. LONDON, ENG., 88 Fleet St., E.C. 4. NEW YORK, 111 Broadway. BOSTON, 734 Old South Bldg. CHICAGO, 1401 Lytton Bldg.

VOL. 1, No. 5 TORONTO, JULY, 1919 Subscription Price $1.00 Per Year

Fairbanks-Morse Power Farm Equipment

—represents a standard of efficiency and economy on the farm that has established it from one end of Canada to the other. This in itself is a sufficient reason for every dealer who does not carry Fairbanks-Morse equipment for the farm to do so—and for the dealer who has already stocked these lines to push them to the end that means greater profits.

Whether for the farm home, the dairy or the field, Fairbanks-Morse Power Farm Equipment is the equipment you should carry.

"Z" Engines	Case Tractors
Martin Ditchers	Ensilage Cutters
Feed Grinders	Water Systems
Lightning Systems	Sawing Outfits
Pumps	Scales

—also a complete line of automotive equipment for all makes of trucks and automobiles.

The Canadian Fairbanks-Morse Co.
Limited

St. John, N.B., Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria

Listen to Mr. Lauder!

Many interesting letters from dealers come to the desk of our Sales Manager, Mr. Burdette. Here is one from a North American dealer, George P. Lauder, of Elphinstone, Minnesota, who formerly handled the Sharples line. There is a lot of food for thought for dealers in Mr. Lauder's brief, but pointed letter.

"Your letter of the 19th received, and I regret that I am unable to secure the agency for the Sharples this season. I have been out of business for the last two years and am only now opening up in the machine line alone, and would very much like to get your agency this year.

"I am handling the . . . . . and . . . . . makes of separators at present, but find them slow sellers, as the price is high and I do not like them as well as the Sharples, which I handled for about ten years or so. I have sold four separators, so far, and think if I had the Sharples next spring, I would sell a dozen at least.

"Kindly let me know if there is any chance of getting back the Sharples contract at any time."

We hope the above will catch the eye of the dealers who are still handicapping themselves by handling makes of separators that do not represent the modern principle in separator construction—separators that are slow sellers — separators that cannot possibly give the dairyman efficient service.

As Mr. Lauder's letter indicates, the Sharples contract is not being hawked around and is not handed out to every dealer just when he wants it. If you are a progressive dealer, in good territory, and that territory is open on Sharples we will be glad to acquaint you with the many advantages of the Sharples contract.

Address nearest office.

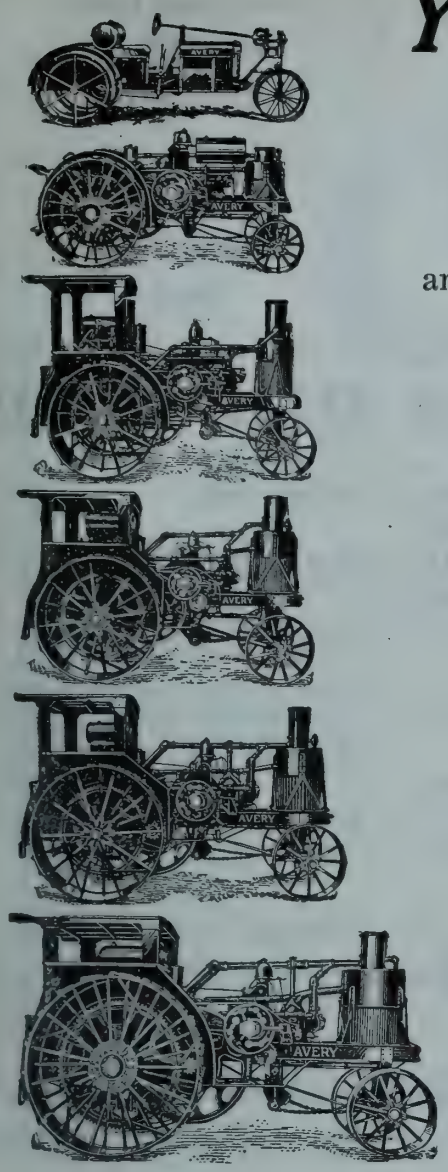
The Sharples Separator Co., TORONTO, ONT. REGINA, SASK.

THE LOUNSBURY CO., Newcastle, N.B.

DISTRIBUTORS THROUGH ALL THEIR BRANCHES

"Over 2,425,000 Sharples Separators in Daily Use"

J. CLARK & SON Fredericton, N.B.



Years of Splendid Record

The name "Lister" is widely recognized as a guide to a profitable investment.
Get the Agency for

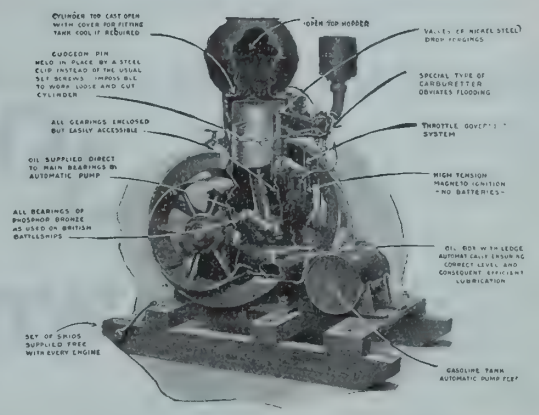
"LISTER" FARM MACHINERY

and you'll realize a consistent growth in business with substantial commission.

Lister
POWER ON THE FARM

The Avery Tractor---

An Avery Tractor owner is invariably a tractor booster because the "Avery" is constructed of materials that make for long wear and minimum repairs. Its motor is built particularly for tractor use and is assembled so that the owner can make his own adjustments and repairs. Take for instance, the **Cylinder Walls are renewable.** When they become worn or scored it's easy to replace them with new walls, making the cylinders practically as good as new and good for many more months of efficient service.


CYLINDER TOP CAST OPEN WITH COVER FOR FITTING TANK COOL IF REQUIRED
OPEN TOP HOPPER
GUDGEON PIN HELD IN PLACE BY A STEEL CLIP INSTEAD OF THE USUAL SET SCREWS IMPOSSIBLE TO WORK LOOSE AND CUT CYLINDER
SPECIAL TYPE OF CARBURETTER OBVIATES FLOODING
ALL GEARINGS ENCLOSED BUT EASILY ACCESSIBLE
THROTTLE GOVERNING SYSTEM
OIL SUPPLIED DIRECT TO MAIN BEARINGS BY AUTOMATIC PUMP
HIGH TENSION MAGNETO IGNITION - NO BATTERIES -
ALL BEARINGS OF PHOSPHOR BRONZE AS USED ON BRITISH BATTLESHIPS
SET OF SPARES SUPPLIED FREE WITH EVERY ENGINE
GASOLINE TANK AUTOMATIC PUMP FEED

The "Lister" Gasoline and Kerosene Engine

2, 3, 5, 7 and 9 H.P.—Standard Hopper Cooled, throttle governed by automatic lubrication and equipped with high tension magneto. Constructed by special means to meet your special needs. Simple—easy to operate, economical.

British Built—and its service shows it. Lister Engines maintain that reputation for dependable service and wearing qualities which is associated with British manufacture throughout the world.

Lister Engines will make you many friends and business boosters.

The "Lister" Silo

Treatment under pressure with wood preservatives makes the stave dampproof and comparatively air-tight and everlasting.

Our side match on staves is so constructed that the tighter the hoops are drawn the closer and tighter the silo becomes—practically a one-piece silo.

The farmer can set up a Lister Silo quite easily with the aid of the Special Sheet of instructions which we issue.

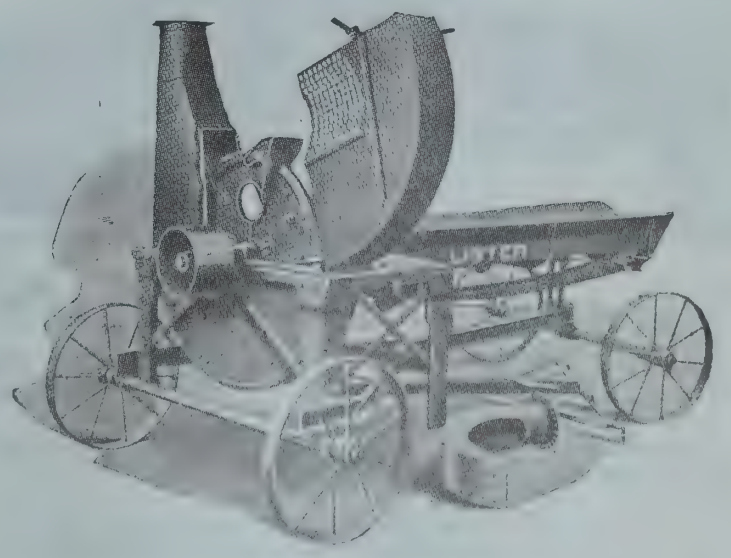
The "Lister" Ensilage Cutter

The service of this machine plays an important part in upholding the good name of "Lister" Products.

Lister Ensilage Cutters are noted for their easy operation, capacity, durability and safety.

Long bearings of **high grade anti-friction metal** ensure a big measure of satisfaction.

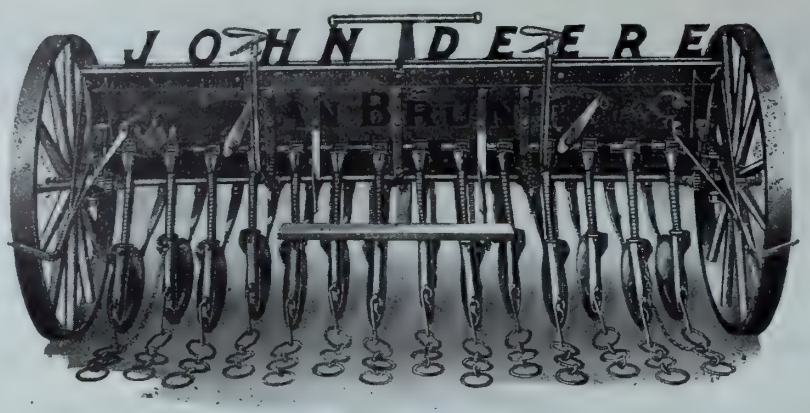
Get a line on our agency proposition. Write for full details—it will pay you.



R. A. LISTER & CO. (CANADA) LIMITED

58-60 Stewart Street, TORONTO -:- **Also at Wall Street, WINNIPEG**

The Van Brunt Single Disc Was the First Successful Single Disc Made



Van Brunt Drills Have Made Their Way By The Way They Are Made

John Deere---Van Brunt Single Disc Drill

FOR OVER HALF A CENTURY THE NAME VAN BRUNT HAS STOOD FOR THE BEST IN DRILL CONSTRUCTION
THIS DRILL IS EQUIPPED WITH VAN BRUNT ADJUSTABLE GATE FORCE FEED—THE MOST PERFECT SEEDING MECHANISM EVER DEVISED
—EACH AND EVERY SEED IS PLANTED ACCURATELY AND AT AN EVEN DEPTH—
—ASSURES A MAXIMUM YIELD FROM EVERY ACRE—

The VAN BRUNT Single Disc Drill is

GUARANTEED

to plant any variety of seed from flax to beans in any desired quantity, in mud, gumbo, or trashy soil, without choking or becoming clogged.

VAN BRUNT DISC BEARINGS are also guaranteed not to work loose or wear out during the life of the drill. If they do, or should even show signs of wear, they will be replaced absolutely free of charge.

JOHN DEERE
WELLAND, CANADA.
THE TRADE MARK OF QUALITY
MADE FAMOUS BY GOOD IMPLEMENTS

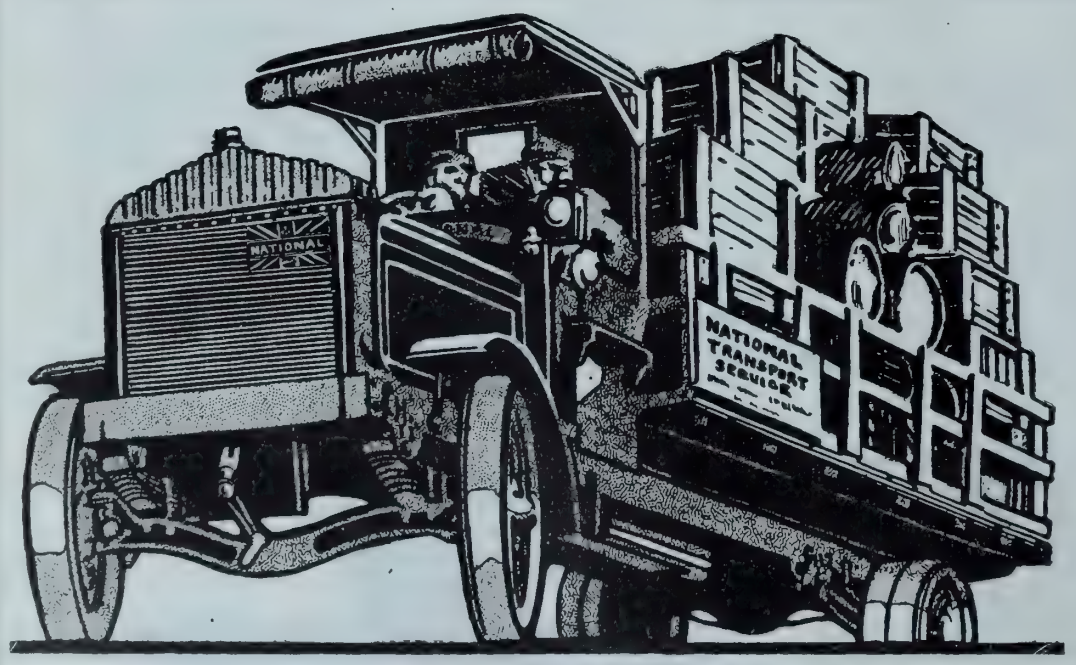
TO DEALERS

We are pleased to receive inquiries from real live-wire dealers in every part of Ontario. If there is not a John Deere dealer in your locality, let us hear from you at once. Our

Extensive Advertising—
Co-operative Sales
and
Dealer's Service Dept.

assure our dealers of easy sales. Every machine we sell is guaranteed to give satisfaction under ordinary conditions, to your customer.

OTHER BRANCH HOUSES—Winnipeg, Man.; Saskatoon, Sask.; Regina, Sask; Calgary, Alta.; Lethbridge, Alta.; Edmonton, Alta.



An Untapped Energy *Always Ready*

Superiority of design, construction and dependable service have been proven by many of the largest Canadian manufacturers in comparative tests. Such evidence is conclusive.

National Trucks have stood up under the strain of hard usage with a reserve strength, and untapped energy and an extra power which few motor trucks can equal.

NATIONAL TRUCKS
ARE BUILT IN CANADA

For dependable performance under all conditions National Motor Trucks acknowledge no superior.

Built in six models—1 ton, 1½ ton, 3½ ton, 5 ton trucks and 6 ton tractor. Bodies to suit your individual needs.

Dealers—Handling the National Truck is an attractive proposition. We invite you to become an integral part of a Canadian Organization. The National is the most popular and serviceable Canadian made Motor Truck. Write us to-day.

NATIONAL STEEL CAR COMPANY, LIMITED
HAMILTON, CANADA

Cletrac

TANK-TYPE TRACTOR

(Formerly Known as the Cleveland Tractor)

THAT'S the tractor they are talking about at the post office and down at the station and everywhere that farmers get together.

That's the Tractor that is the centre of attraction at every demonstration.

It's certainly a wonderful little machine.

The farmers who have used it say so.

The dealers who have sold it say so.

The engineer who knows what good automotive designing and construction is says so.

The boys who saw it working in the mud in France say so.

That's the Tractor for You to Sell

Don't Wait---Write for Our Proposition Now

Send For This Book

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CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Volume I | TORONTO, JULY, 1919 | Number 5

Tractor Dealers Can't Live On Rosy Hopes!

Ontario Tractor Distributor, Who Handles Cletracs, Tells Why Discounts should be at Least 35%—Moose Jaw Dealer Says Some Companies' Discounts Are High Enough—"Very Much Too Low," Asserts Indian Head Dealer, Considering Extra Service Necessary

W. J. Bedwell Writes:

THE extra food demands created by the war were primarily responsible for the sudden development of the tractor industry.

The world's needs coupled with the scarcity of farm labor made it necessary for more intensive and labor-saving methods of farming to be applied

The tractor industry therefore offered such a favorable field to manufacturers that they entered into it without considering fully the details applying to the marketing of their product from the distributor' viewpoint.

In Canada a market had to be created and a large educational campaign undertaken. A great deal of this work had to be thrown on the hands of distributors, and they in turn had to interest dealers. The discounts offered by the manufacturers to the distributors were so small as to leave a bare margin after they in turn provided for dealers.

The organization work for a distributor of any standing called for an extensive advertising campaign, the appointment of one or more road salesmen and one or more road service men. If only one of each were appointed, the minimum cost of their wages alone would be $250.00 per month.

SELLING in quantities for this section of Canada is bound to be slow for several years, therefore, it will be practically impossible for any conscientious distributor who advertises sufficiently and gives efficient service to do anything but suffer a loss.

There is no doubt that in the future the tractor business will develop and become as strong relatively as the automobile business, but that time will not arrive for several years.

The educational work necessary to convince the ultimate buyer of the need and the advantage of a tractor, and the service to begin after the sale, is shared by both the distributor and the dealer, but to a far larger extent by the former than the latter.

Manufacturers should investigate the situation from the present-day viewpoint of small sales and heavy expenses and not from the viewpoint of the future large sales with less expense and increase their discounts to the distributors, to at least 35 per cent. and the distributor in turn should share his discount with the dealer on a fifty-fifty basis.

The days of working for glory have gone by. The manufacturer when he disposes of his goods to the distributor is assured of his profit and the distributor in turn must be assured of a legitimate return for his investment.

Many distributors at the present moment are in the tractor business with hopes built on a foundation of rosy sales talks and are only staying with a hope of getting out even and retrieving what has amounted at the present moment to an actual loss.

There are so many opportunities for investment these days that bring an adequate return, that unless manufacturers generally realize that a distributor is entitled to a fair living without taking a gambler's chance, the business will be relegated to the hands of the small man direct at full discount and the share of the expense the distributor is bearing thrown back on the manufacturer.

Hugh Rorison Writes:

A TRACTOR discount of from 15 to 20 per cent. is in my opinion very fair as the business is done in the West, that is with the company having a line up of experts. If the dealer were to carry a heavy stock of repairs and do all his own experting, selling, etc., and buying his goods outright in quantities, this would be different. That is not usual, in the West particularly.

The J. I. Case, T. M. Co., one of the firms I represent, pay a 15 per cent. discount with an increase to 20 per cent. of over 10 tractors are sold. A better contract than this can be secured by buying quantities wholesale with a minimum for the year of $20,000 worth of business.

"Farm Implement News."

Dealers who are "on their toes" will educate prospects on belt power possibilities as well as draw-bar.

The real evil in the machine business is in the discounts on small machinery. This is a disgrace, absolutely, in the West at least. Margins of around six to twelve per cent. are the prevalent rule with practically all the firms; this is after freight is paid.

J. A. McKenzie Writes:

TRACTOR discounts are too low. I quite agree with your paper on this point. We handle a line which pays 10 per cent. on Winnipeg list, with an additional 8 per cent. for cash on delivery, which has to be given to the purchaser if he pays cash. We understand that the same concern pays their dealers in the States 20 per cent. and 8 per cent. on their factory list, which amounts to considerably more than Canadian dealers get. With the extra service that must be given on tractors we consider the present remuneration much too low. We hope your article will bring good results.

Two Tractor Shows

TWO tractor exhibitions and demonstrations of international calibre will be held in Central Canada during October—at Ottawa and Chatham.

The Eastern Ontario and Western Quebec Ploughmen's Association announces for October 14, 15 and 16 a "ploughing match, tractor and farm machinery demonstration."

It is good news to learn that W. H. Day, formerly professor at Ontario Agricultural College, Guelph, is to be manager of the tractor end of the demonstration. This assures an efficient three-day "show." The sanction of the Federal Deputy Minister of Agriculture has been obtained, and the officials of the Dominion Experimental Farms are co-operating with the association's committee. An interesting event will be a plowing match for tractor owners, the machines to be drawn by the farmers themselves—not by company experts.

The Ontario Plowmen's Association announces an "International Plowing Match, tractor and farm machinery demonstration" for October 21, 22 and 23. All kinds of machinery used on Canadian farms will be in operation. $1,600 in prizes is being offered for tractor and horse-drawn plow demonstrations. The secretary and managing director, J. Lockie Wilson, expects 25,000 to 30,000 people to attend during the three days.

The exhibits of tractors and farm implements at the Canadian National Exhibition, Toronto, this year will surpass in numbers and variety the record of any previous year. Manufacturers, in the United States and Canada, recognize the value of an audience of 1,000,000 people. It is expected that every style of tractor sold in Canada will be shown.

Why Has Dauphin, Man., a Traffic Cop?

We'll tell you: With a population of 4,000, there were 361 car owners last year—official figures—and there are 2,500 cars in the district—and they all visit Dauphin Saturdays. M.T.I. representative visits Dauphin, Gilbert Plains, Neepawa and Moose Jaw. E. H. Scott interviews live dealers, and tells why they're live.

DAUPHIN

Not a **Living Thing** on His Farm, Except His Family

By E. H. SCOTT

AFTER a visit to the north-western part of Manitoba, particularly that section of country between Neepawa, and Dauphin and beyond, I returned with the impression that the man who cannot operate a gas engine of one kind or another has no place in the modern scheme of development as it is being worked out there.

Whether in visiting the various towns, or in passing through on the train, the fact is thrust upon the traveler that this wealthy farming district is experiencing all that it means to live in a gas age.

Not only is the country alive with automobiles—and it may be said in passing that it has outgrown the flivver type and is buying higher priced cars—but one sees at work on the land a constant succession of large and small engines hauling anything from two to eight bottom plows. Breaking plows with trucks are largely in use and dealers state that a lot of them are being ordered this spring. Fully 10 per cent. more land will be broken this year because of the wonderful work of the tractors, according to A. H. F. Stelck of Sutherland and Stelck, Ltd., dealers in implements. He cites as an indication of what can be accomplished in a few weeks the case of Fred Forresburg, a young farmer from the United States, who came in this spring and purchased a section of land.

"There is not a living thing on his farm except his family," said Mr. Stelck. "He has one Titan tractor with which he has broken up and seeded 100 acres to wheat this spring. He runs into town for oil with an old Ford car with the body off. There can be no comparison on the economy he effects as compared to the work of horses."

Continuing this dealer went on to tell of the work of motor trucks for hauling grain, which are fast coming into use. He predicts that within ten years there will be scarcely any horses in the district.

BUT to get back to the subject: About the most common thing that one sees at every railway station are the familiar gasoline drums. During a visit to Dauphin a little weazened-up foreigner, who looked as if he had stepped from the heart of Eastern Europe, casually drove a Fordson down the main street of the town hauling a wagon with a three-decker box in which was loaded five gasoline drums. He attracted no attention. A short time afterwards a powerful little Case tractor "walked" right along close to the curb with a couple of steel road drags of the "split log" variety behind. It developed from investigation that the dealer was simply making a demonstration of his machine, while at the same time helping out the town.

Messrs. Sutherland and Stelck have delivered upward of ten Titan tractors this spring—the last year they sold 15 of these—M. A. Spillette has sold seven tractors, and other dealers are selling in proportion.

Two of the handsomest structures in the town of Dauphin are two new brick garages that were erected last year, one of red and the other of white brick. They have each a frontage of 48 feet and a depth of 110 feet. J. R. Eagle, a vigorous young merchant who has developed to his present status after operating a machine shop for years, is the owner of one of these garages, which he erected only last December. Already this year he has sold 8 Dodge cars, 4 Chalmers and 3 Maxwells, and is ordering more shipments by the carload. A. H. Feldman is the owner of the other new garage. He makes a specialty of Fords, and states that with the installation of self-starters and lighting systems on these cars he expects to do a larger business than ever before. M. A. Spillette, who operates a small garage, has sold 15 McLaughlin cars this year.

A new garage is to be opened shortly in Dauphin by two young men who have come up from Chicago for this purpose. The firm will be known as Cheville and Hood.

ACCORDING to official figures there were 361 cars owned in Dauphin last year, which means that with a population of 4,000 people there is one car for every 11 of them. It is estimated that there are upwards of 2,500 automobiles in the Dauphin district. The congestion of cars is so great in Dauphin on Saturday afternoons and evenings that a traffic policeman is necessary in order to prevent accidents. During the afternoon when the male members of the family are at work, the family is bundled into the car and mother takes them for long, healthful rides into the country. There are few members of the family who cannot take their place at the wheel.

The immediate effect of so many cars is a closer co-operation between town and country. The farmer and his family come more often to town. They purchase more freely, they attend church in the city and patronize the picture shows. The city man on the other hand gets into the country and becomes familiar with the farmer's point of view.

The presence of so many automobiles acts also as a spur toward good roads, and in this connection there is an interesting development at the present time, a decision having been arrived at to take advantage of the Provincial Good Roads Act for the entire municipality. Under this act the Provincial Government undertakes to spend 50c for every dollar spent by the municipality.

View looking toward the street of the display platform erected in a central position on the main street of Gilbert Plains by Nelin & Robertson, implement agents. The office of this firm, which formerly stood on the street line, was moved back to the rear. The building in the background is a bank.

GILBERT PLAINS

Display Your Implements, Not Your Office

By E. H. SCOTT

IN a central position on the main street at Gilbert Plains, Manitoba, stands one of the finest displays of farm implements and tractors in the North-west. Next door and immediately across the street are the two branch banks in the town, with which the farmers must constantly do business. On the other side of the display is a large general store.

Until last fall a frame building stood along the street line on this site and was occupied by Messrs. Nelin and Robertson, implement dealers, largely as offices. They kept such implements on display as space would allow, but the bulk of their stock was kept in a warehouse on a side street.

The birth of an idea has brought a complete change. Last fall the frame building was moved back from the street about 100 feet and the entire area, 50 x 100 feet, in front of it converted into a platform constructed of heavy planking about two feet above the sidewalk. Here there is an attention-compelling display of brand new packers, plows, manure-spreaders, seeders, harrows and such seasonable goods. Titan and Case tractors are also shown off to advantage. There is a look of bustling activity and prosperity about the place and the firm is doing an excellent business in a season that is not looked upon as exceptionally favorable.

In many Western towns the implement business is relegated to a side street, or hidden away in some building on the main street. The Gilbert Plains idea is an example of what can be done to stimulate business.

NEEPAWA

Sells Nothing But Gasoline and Oil

By E. H. SCOTT

SPECIALTY stores have become quite the thing in the larger urban centres, but it is something new to locate a store in a town the size of Neepawa, Manitoba, that deals exclusively in oils.

The development of the tractor and automobile business in this part of the country is the answer.

The opening of this store was brought about by a process of evolution. Its owner, John Howatt, was for many years a drayman in the town, and as the gas engine became more and more popular he handled the shipments of gasoline and oil sent to individual customers. Later he became the agent of the Imperial Oil Company, and out of this grew his specialty store.

The store is divided into two parts. In the front portion package goods are displayed exclusively. The firm for which he sells puts up its lubricating oils in five- and ten-pound cans. In the rear portion of the store, arranged in a semi-circle on an elevated platform, are thirteen barrels of oil, mostly of the cylinder variety which is sold off the tap. Last summer Mr. Howatt sold 47 barrels of this oil, while in one month alone he sold 16,000 gallons of gasoline.

This small town oil specialist is in the position of being able to open up negotiations for the sale of lubricating oil to every man who purchases gasoline. He never misses an opportunity to press home a sale. His store stands at a prominent location on the main street, and is so easy of access and as elaborately stocked as to draw and hold the trade of a large section of the farming community.

MOOSE JAW

Auto Shortage in West

A SHORTAGE of automobiles, in which practically all makes are included, is creating a difficult situation for dealers throughout Western Canada. Many of them are unable to make delivery of cars which have been ordered for weeks, and the Winnipeg strike situation of the past six weeks has practically shut off th supply.

The demand for cars is growing greater with each succeeding month. The other day it was announced that there was an automobile for every 14 persons in Saskatchewan.

As indicating the manner in which the progress of the crop affects the sale, an automobile traveler stated recently that immediately after the satisfactory June rains, which just saved the situation in many parts of the West, there came a rush of orders for cars in carload lots. This salesman, who handles Gray-Dort cars, stated that fifty-four of these cars were sold in Moose Jaw alone during the month of May.

Implement Tariff Cut, Some Say Not Enough

REDUCTIONS in the implement tariffs were made by Sir Thomas White in his budget, which passed the House a few days ago. The Toronto *Globe* summarizes the results as follows:

On certain classes of implements, such as cultivators, harrows, horse rakes, seed drills, the tariff, formerly including the surtax now remitted, has been reduced from 27½ to 15 per cent. The net reduction as compared with pre-war duties is 5 per cent. In the case of plows, traction engines, portable engines, wind mills, and threshing machine separators, the tariff and surtax is reduced from 27½ per cent. to 17½ per cent. In effect the reduction on this last class as compared with pre-war duties is but 2½ per cent., because practically all the importation comes in under the general tariff, upon which the surtax, now removed, was 7½. In the case of hay loaders, potato diggers, grain threshers, fanning mills, and other classes of farm machinery, the reduction of the tariff is from 32½ per cent. to 20 per cent. This again is inclusive of 7½ per cent. surtax imposed for war revenue purposes. The reduction in the pre-war tariff on these articles is five per cent. The only other tariff reduction of special value to farmers is that made in cement, the rate now being eight cents per hundred pounds, two cents less than the former general tariff rate.

In the case of the tariff changes upon implements, Sir Thomas White forces the railway companies—among them the unprofitable lines operated by the people of Canada—to stand part of the manufacturer's loss of protection by hauling implements from Canadian manufacturing centres in Ontario for the same rate at which like implements are hauled from the American centres of manufacture about Chicago. The effect of this will be that Canadian railways must haul a carload of agricultural implements from Toronto, Brantford, Hamilton, and other points, at which the manufacturing industry is centred, a distance of from 400 to 520 miles farther than the American railways will haul for equal rates agricultural implements produced on the other side of the border.

The following table shows comparative figures of the reciprocity bill and the new budget:

	Reciprocity Bill	Budget of 1919
Wheat	Free	Free
Wheat flour	50c. bbl.	Free
Potatoes	Free	Free
Cement	11c. cwt.	8c. cwt.
Iron ore	10c. ton	Free
Cultivators	15%	15%
Harrows	15%	15%
Horse rakes	15%	15%
Seed drills	15%	15%
Plows	15%	17½%
Windmills	20%	17½%
Portable engines, with boilers, horse powers, and traction engines for farm purposes	20%	17%
Hay loaders, potato diggers, fodder or feed cutters, grain crushers, fanning mills, hay tedders	20%	20%
Farm or field rollers	20%	20%
Farm wagons	22½%	20%

An amendment to reduce the duty on plows 2½% was made by J. A. Maharg, but was lost by 58 to 40.

This photograph shows the Western Motors, Ltd., building in Brandon, Man., which we described in the June issue. The strikes in Brandon and Winnipeg held up the mail so that this reached us just too late for the June number.

A SON-OF-A-GUN TO WALK!

DURING the course of a recent visit to Holland, Manitoba, a representative of MOTOR TRACTOR AND IMPLEMENT called at the office of F. Stockwin, implement dealer. A youth met the visitor.

"Mr. Stockwin is out in the country," he said.

"Does he make a practice of going out in search of business?"

"Oh yes, he's out taking orders for binder twine right now." (It was the fourth of June).

"Suppose he travels around in a light runabout or touring car?"

"No, the boss is out walking. He's a son-of-a-gun to walk, and besides he hasn't got a car. You see, the Grain Growers will be getting together soon after seeding, and they usually chip in together and arrange to have their binder twine come in one big shipment; well the boss is beating them to it. He will round up several good orders before they get time to meet."

And in the same town there were other implement men sitting around, wondering how to get business in a slack season.

New use for tractor—a "Cletrac" in a Canadian sugar bush—the tractor continues to grow in favor and versatility.

TREMENDOUS TRACTOR DEMANDS

J. A. GRAHAM, manager of the Massey-Harris Company, wholesale distributing warehouse at Yorkton, Sask., which supplies branch agencies over an area of 160 miles square, stated in the course of an interview the other day that the sale of farm implements was not keeping pace this year with that of former years. He attributed this condition to the unsettled political situation at Ottawa with regard to tariff changes.

Mr. Graham says this year has proven one of the greatest for the breaking of new land that Western Canada has ever seen. Last year, he says, was exceptional in this regard. To this he attributes the extraordinary sale of tractors in the last eighteen months. He points out that North-western Manitoba has led the West for the past two years from the standpoint of general prosperity; at the same time he deplores the fact that the large foreign element in this part of the country reaped the benefits which should go to English-speaking people.

"It is too bad," he said, "that foreigners should have been allowed to take up such vast tracts of land and hive together to the exclusion of English-speaking men. The whole thing can be traced back to 20 years ago when Yorkton was at the end of steel. The foreigners direct from Europe poured in here, and instead of being distributed throughout the West proceeded to locate over a wide area. Since that time they have attracted their friends and relatives to the district until they overrun North-Western Manitoba to a large extent. They have enjoyed the utmost prosperity, and in the last couple of years have entered apparently into an automobile-buying competition that knows no end."

Here's a bonnie lassie operating a tractor in the West—she's competent and enjoys it.

With Our Readers

We're always pleased to get interesting, pithy letters—especially those with ideas. Extracts from a few will be published from time to time.

FAVORS ACT

Editor, M. T. I.—I have read the clauses of the New Manitoba Implement Act in your June issue, and I think this is a good thing and should work out to advantage. I don't quite agree with it regarding the forbidding of the sale of repairs at higher than list price, however. There are always express charges on repairs, and an agent must charge enough to cover this. Outside of this clause I think the act would work fine in Ontario.

Wishing your new journal every success.—W. E. Moore, Tillsonburg, Ont.

Editor, M. T. I.—Your journal is first-class—keep right at it, and build up on the foundations well laid. W. J. Allin, Chatham, Ont.

Editor, M. T. I.—Your paper is a good one. One of the best features of it is the New Equipment Section. I'll probably have a car contract next year, and will need this more than ever.—Wilfrid A. Harvey, Macoun, Sask.

Editor, M. T. I.—We are handling autos, implements and accessories, and we expect to add tractors shortly. Your household and dairy section interests us particularly, as we intend to specialize on the sale of equipment to the farmers' wives—such as washing machines, churns, etc., operated by power. I consider that your paper can be of much benefit to dealers.—Fortier and Beauchesne, Sturgeon Falls, Ont.

Editor, M. T. I.—Your paper's no good for dealers. Is it got out for manufacturers?

Editor's Note: No, it certainly is *not*. Besides, we'd rather have this signed. Don't forget your name and address, even when knocking us.)

Editor, M. T. I.—Your journal is an excellent trade paper and I enjoy your articles very much. Give all the space you can afford to the New Equipment Section, or we'll get behind the times.—O. M. Lundlie, Prince Albert, Sask.

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LET YOUR EDITOR KNOW!

WHEN you, Mr. Implement Dealer, deliver a tractor to one of the farmers in the district, do you see that your local paper mentions it as a news item? If you don't you're missing an opportunity. It's news; the editor in any rural centre will be glad to get such an item.

Do you, Mr. Auto Dealer, when you sell one of the leading citizens of your town, or county, a new car, let the editor of the local *Bugle* or *Clarion* or *Herald* know about it? In some of the larger cities this isn't *news;* there are *too many* buying cars. But in the smaller cities, and in the towns and villages, *it is news!* We've seen items like this in scores of papers, from the Pickering (Ont.) *News* to the Manitoba *Free Press.* The automobile, tractor and implement concerns have never advertised to a larger extent than at present; the editors of the "Weekly Auto Section" of dozens of papers were never harder put to it to get "news" items to fill in the reading space beside and around the ads.; therefore there is no place where it is easier to get valuable publicity than in this auto section.

So, get busy and take advantage of your strategic opportunity. It means dollars to you.

THIS COUNTY IS "SOLD"

THE editor of the Picton *Gazette* (Ontario) is "sold" on the power farming proposition. And, by the same token, everyone in the county of Prince Edward and environs should be—probably is—"sold." Every tractor and implement agent should read this—and then make certain that *his* local editor is prompted to make mention of "tractor" successes, especially in the face of adverse conditions. Here's what the Editor says:

"Last week's farming difficulties should prove an excellent argument for the tractor. Indeed there were in Prince Edward at that time many object lessons of its very great value. While farmers using horses were unable to do more than a half day's work in the twenty-four hours, the owners of a farm tractor had none of these difficulties. He could continue work without interruption during the entire daylight hours. The heat only made the gas driven tractor more efficient while there was also plenty of power to handle the sun-baked soil."

NO "BEST" TRACTOR

THERE is no such thing as a "best" tractor any more than there is the "best" breed of hogs, or the "best" breed of cattle, or the "best" breed of dogs. The reason is perfectly obvious when one stops to ponder. If there were such things as a standard soil, climate, topography and type of operator, then we might be able to develop a standard "best" kind of tractor.

Moreover, one man takes a certain make of machine and does well. He is pleased with his results. Another man buys exactly the same make of machine, works it on a similar farm and makes a failure. Where should the blame or credit be applied, to the man or to the machine? In the case of failure we may blame the machine, but if we do, then we should also credit the success to the machine. Obviously, however, both the success and the failure were due to a combination of man and tractor. One may take his choice, but the evidence piles up that some men never fit into a machine combination.

The scrub tractor should follow the scrub bull or the scrub stallion out of the country. They have been tested and turned down by an examining board because they did not come up to the approved standard. Therefore, all makes of tractors that are offered for sale should be tested and approved.

SERIALS AND TRACTOR ADS.

A FEW days ago I dropped into the office of my friend, the Editor of *Farmers' Magazine,* and he showed me a letter just received from a farmer which is indicative of the wide-spread interest which is being taken in tractor advertising. He had sent out a questionnaire to a number of readers asking them what features of the magazine interest them chiefly. The letter he had in his hand was from a farmer in Maidstone, Ontario, who said: "The first thing that I look for when I get your magazine is the serial story. After that I read the tractor ads."

The national advertising being done by large manufacturers of power farming machinery is one of the best aids that the dealer in these lines has. Many a prospect is clinched in this way, if the dealer only knew it.

"Punch"

The ex-airman gets into a "nose-dive"

USEFUL DEMONSTRATION

DURING the coming autumn there will be a number of tractor demonstrations and educational exhibitions held throughout the various provinces, announcements having been already made of "shows" for Ottawa, Chatham and Swift Current, etc. The Canadian farmer, especially in Western Canada, is pretty well "sold" on the ability of tractors to plough successfully, and it follows that if a tractor can pull a gang of plow bottoms it ought to draw a harrow, and seeding machinery and the like. But there are a good many men who know little or nothing of how profitably a tractor can operate silo fillers, grain separators, draw heavily-laden wagons at a good speed, and many other essentials of farm work. Educational demonstrations would be of much more benefit if they exhibited the versatility of tractors, and showed how they can be used all the year round. One of the greatest arguments the dealer has to meet at the present time is the statement that the tractor "is good only for a few weeks each year." A practical demonstration of all the other things which can be done with the tractor would be very valuable, and dispel this illusion.

IMPLEMENT PROBLEMS SERIES OF ARTICLES

A SERIES of articles of interest to every implement dealer in Canada will begin in the next issue of M.T.I. We have asked four implement dealers in Saskatchewan, who have spent years studying the various problems encountered, to write these articles. They will commence in the August issue, and continue in September, October and November.

The subjects are:

1—General increase needed in the margin on sale of small implements.

2—The time limit allowed for the charging back to the agent of notes unacceptable to the company.

3—The evils of small discounts of small farm machinery and parts.

4—Should there be a general increase in the margin on sale of repairs?

The first article will appear next month, and the names of the writers of the three succeeding articles will be announced.

MANUFACTURERS' AIDS

A GOOD manufacturer to link up with, is one who believes in giving the dealer the fullest possible backing, whether it be in the way of literature, sales schools, or cuts and electros for local advertising purposes. If the manufacturer whose lines you handle has any of the "first aids to dealers" be sure to take advantage of them. If the manufacturer does not send you what you want, write him for aid, giving him ideas as to what would be most useful in your community. And when he does send you anything that might be useful do not let it lie around your shelves, but put it quickly on the job of pulling a few more dollars.

GET OUT AND HUSTLE

DEALERS who intend to sell a lot of tractors during this coming fall cannot afford to sit back in their offices and expect prospects to come into their offices. One tractor dealer who found business rather dull announced to the farmers in his community that any small farmer who had a little patch he wanted plowed, and who hadn't been able to do enough work to get his crop in with his horses, could save himself from further delay by paying him $4 per acre for plowing, with a proportionate charge for fitting. A lot of little farmers took advantage of the opportunity and got their crops in in double quick time, while their more prosperous neighbors were *wishing* that they could do so.

This dealer began to have calls from the larger farmers, asking for the same service, and he announced that he was not interested in doing work on a custom basis for anyone who *should* have a tractor of his own. He got a lot of good advertising and at the same time rendered the community a signal service.

Another dealer went after hauling jobs, and in one case moved a meat market 1½ miles through the streets of his town. These "stunts" earn not only a few honest dollars but also give the dealer the very best kind of advertising.

FREE SERVICE

A WINNIPEG garage, which is also one of Manitoba's leading automobile accessory firms, has built up an enviable reputation for service that is well known throughout the West. The plant is manned by the finest experts that it has been possible for the company to obtain. The unique feature of the firm is the method it uses in giving the motorist free service—something it does often.

Now, the question of free service is something which the automobile man must carefully watch, and see that it does not get out of proportion to the actual amount of paid work he does. But there are certain little courtesies which will certainly repay the dealer. When service is done by this Winnipeg concern that requires no charge, the owner is not informed of the fact until he presents his ticket at the cashier's window. The cashier then gives Mr. Motorist a pleasant surprise by stamping the slip, marked: "Compliments of Motor Products, Limited."

FATE OF WILHELM'S AUTO

IT'S sad, but it's true. The royal chariot of the all-highest has been sold to a man in Berlin, who is going to use it for a jitney bus. And if Wilhelm ever goes home again, he'll find himself in strange company when he takes his former benzine cart for a ride down Unter den Linden. A common, vulgar auction did it. The car was dilapidated because of hard driving during the war, and now where once a trumpeter from the front seat sounded fanfares to announce that the all-highest was approaching, no doubt we'll have the megaphone-mouthed crier with "On the right, ladies and gentlemen, you see—" Anyway, it looks as if William "gave up" his kingdom to get a ride in a jitney.

Wealthy Western Foreign Farmers Favor "Flivvers," *and*

Also Buy for Cash More Expensive Types — H. Bronfman, Yorkton, Sold 230 Gray-Dorts This Spring — A Live Story of a Live Community

By E. H. SCOTT

THE PRIDE OF POSSESSION!

Look at the expression of the man at the wheel! Don't you think he's PLEASED to have Mr. Scott snap him? The man at the wheel and the two sitting in the centre on the running board of the Gray-Dort car all purchased automobiles of this type, paying spot cash for them at Yorkton, Manitoba. The man at the left is the agent who brought them up from Rhine to arrange the transaction, and the man at the extreme right is a former purchaser. All five represent the type af foreigners who are purchasing automobiles by the hundreds in Northwestern Manitoba.

THE extent to which foreign-born citizens are purchasing automobiles and tractors in the great farming section of Northwestern Manitoba, and Northeastern Saskatchewan in the vicinity of Yorkton, Canora, Veregin, Kamsack, Grand View, Gilbert Plains, and farther to the east, west, and north is almost beyond belief.

Representing the CANADIAN MOTOR TRACTOR AND IMPLEMENT TRADE JOURNAL recently, I made a trip through this section of country, and was astounded at the discoveries. Interviews with bank managers, implement dealers and merchants all confirmed the same views that the foreigners, including a large number of alien enemies are rolling in wealth. They are no longer purchasing cars of the "flivver" type to the same extent as formerly, but the better class of light cars that cost anywhere from $1,200 to $1,400. They are becoming adepts in the use of the light tractor, which is quickly taking the place of horses, and they are purchasing modern machinery, phonographs and ranges, and paying cash for them. There is no sign yet of a tendency to instal modern plumbing and baths, neither is there any great effort at dress reform except in the case of some of the younger women. In the various towns visited hundreds of cars were seen on the streets driven by foreign-born men or women for the most part dressed in the style of garb they wore when they came to this country from 10 to 20 years ago, or very similar. The women still wear the gaudy head shawls, and gaily-colored skirts that fit around 46 to 50-inch waists.

PROMINENT among the purchasers of cars and tractors are the Doukhobors, and the use of machinery fits very prettily into their scheme of things, for they are averse to maltreating horses by heavy work on the farm.

Harry Bronfman, of Yorkton, who has the general agency for Gray-Dort cars in this part of the country, stated that he and his agents had disposed of 230 of these cars this Spring, largely to foreigners. In addition, he stated that he had sold two Reos, one Dodge and four Nash cars to foreigners this Spring. He stated that last fall he made deliveries in December of $50,000 worth of Oldsmobiles, principally to foreign-born farmers for which he received the cash three months in advance.

While I was in Mr. Bronfman's office one evening, toward the end of May, an elevator man from the town of Rhine, who acts as agent for him, brought in three prospects, all of them foreigners, roughly clad, who looked as if they had stepped out of a city sewer excavation. All three bought Gray-Dort cars, paying spot cash for them. The Rhine agent was asked for details as to the financial standing of these three men.

In the case of the first man, he stated that he was the owner of a section of land, three-quarters of which was clear title. The other quarter was purchased last season for $5500, the buyer making a cash deposit of $3,000. This farmer also had 11 horses valued at $2,500; 18 cattle worth $2,000; and farm machinery valued at $3,000. He lived twenty-six miles from Yorkton, had a wife and ten children and came out from Austria ten years ago, at which time he took a homestead, almost penniless. The second man owned a half-section, all clear; 10 or 12 good horses, worth $3,000; 25 head of cattle estimated to be worth $2,500; considerable machinery, all paid for; possessed Victory bonds worth $700; and two carloads of oats at Fort William for which he had not yet been paid, and had another 1,500 bushels at home. This man had a family of four children. The third man owned a section of land, all clear, owned 25 horses and $5,000 worth of Victory bonds.

MR. BRONFMAN finds it expedient to appoint agents among the foreign population at all points. They are developing a joy-riding mania that will be hard to stop, he says.

Levi Beck, who handles Chevrolets at Yorkton, states that he has disposed of forty-five of these cars this Spring, a very heavy percentage of them to foreigners. Last year he sold 100 Chevrolets, principally to foreigners. He states that he is handling two carloads of Chevrolets each month, and all his sales are practically for cash, for the financial standing of purchasers must be such that the bank will discount their paper. Mr. Beck, by the way, has operated a large general store in Yorkton for several years and still continues to operate it.

W. J. Fennell, of Canora, stated that he had disposed of forty-four McLaughlin cars this year in addition to four tractors, and foreign-born farmers were his principal customers. He stated that he found the aliens to be a very honest people as a rule. They had been educated to ask for terms of two or three years on machinery, but when they become possessed of the ready cash, they come in and liquidate their debts, even if only two or three months have elapsed.

In the case of English-speaking clients he finds that they generally take full time to pay, without regard to their financial improvement. H. Gleason, Massey-Harris agent in the same town, has had the same experience, and stated that he had never lost a cent on the Doukhobors. The manager of the Union Bank at Canora, and the manager of the Canadian Bank of Commerce at Kamsack, both stated that it was not an unusual thing for a foreigner to present a statement showing assets of $50,000, while those showing a financial standing of from $10,000 to $25,000 were common. The Union Bank manager stated that while he was in charge of the branch at Neudorf for some years, and doing business largely with foreigners, he never lost a cent. The usual advance asked for by a foreigner in the Spring ran about $1,000, and this was sufficient to see him through until fall.

THE foreign implement firm of Kalmakoff & Ostoforoff, of Kamsack, have sold 10 tractors to their countrymen this year, including four International tractors, three Rumelys and three Fordsons.

I was present during the sale of a light tractor to a Czecho-Slovak, who apparently had brought several of his relatives to advise him. This sale, which was made by Mr. Kamakoff, resulted in a snappy demonstration of selling ability that was a delight to witness. When the tractor had been properly primed with gas, the salesman lessened up its joints for a brief space by running the engine at high speed. Then he vaulted into the seat and backed the tractor out into a field where he proceeded to swerve about in circles, with the engine showing every manifestation of power, so swiftly did the little tractor get about. Then setting the wheel and standing aside the driver let the tractor run around the field itself, giving an impression of simplicity of operation and made a deep impression on the mind of his prospect.

The last scene of the episode occurred when the purchaser was observed proudly driving his tractor home, with the agent running along by his side instructing him how to operate it.

THERE is a vast area in this section of Northwest Canada that is almost entirely populated by people of foreign birth and their children. With grain and livestock prices maintained at present high levels they are making vast sums of money. And yet they are content to live in their humble log and thatched homes, eat rough food, wear overalls and cheap clothing, while they are putting their money into machinery and automobiles. It is for this reason that they can pay cash for these goods, and it is for this reason that dealers in this part of the country are reaping a rich harvest.

THIS IS FINE PUBLICITY!

The excavation of a cellar for a new building at Yorkton afforded Harry Bronfman an opportunity to demonstrate the power and service of this 12-25 h.p. Avery tractor for which he is agent. Wagons heavily loaded with earth were easily and speedily hauled up a steep incline on the end of a long chain, after which horses hauled the load to the dumping ground. This stunt attracted considerable attention.

Tractor is Hope of Canada's Highways

By B. J. PAULSON

THE immediate hope of Canada's rural highways is the tractor. Canada needs better highways—and what she needs, she will get. In the case of good country roads, the tractor is going to help her get what she wants; it is playing an important part in this work in the Dominion at the present time—and will play a still more important part in good roads development in the near future. And the importance of better highways cannot be overestimated.

Our highway and railways are the arteries of commerce. Through them flows the life blood of the country—the products from the farms that sustain the city dweller and the manufactured products from the cities back to the farms to sustain the farmer. And the railroads are dependent upon the highways for their existence because the farmer must transport his products over roads before they can reach the railway for long distance transportation to the cities. Without these arteries of commerce our great West would still be an unproductive wilderness.

The rough frontier trails made and followed by the early pioneers unlocked the doors to a wonderful agricultural empire—an empire that is still in the building. Roads followed the trails and settlers followed the roads. And as the roads develop, the country which they tap develops in proportion. You will invariably find good roads in well-to-do, prosperous farming communities and in the same way, where the roads are rough and poorly kept, you will usually find a community of struggling farmers who have a hard time making both ends meet or else you will find new communities, such as those prevailing throughout the West where the homesteaders have not found time to develop the roads.

But we must have good roads both in old and new communities, for good roads lower the farmer's hauling costs because they enable him to cover the distance to town in less time than he could over rough roads and they also save his hauling equipment—both wagon and harness or motor truck. Good roads also make life in the country more pleasant and agreeable as they make it easier to get around to see one's neighbors occasionally and to take the family to town more often, thus promoting social welfare. Good roads increase the price of land because of the facts just stated and also because they bring people from the cities out into the country in their automobiles, where they see perhaps for the first time the agricultural possibilities of different sections of the country. They go back to the city with a lot of good impressions which they pass on to other people, who, in turn, pass them on to still others, and so on, advertising the country and its resources. Eventually this will attract farm purchasers from less desirable parts of the country—and up goes the price of land in the good roads community.

GOOD roads always keep the passing travelers optimistic and good natured, while poor roads—well, you've probably come near losing your religion more times than you'd care to tell cussing stretches of bad roads where you jolted over rocks, roots and chuck holes or bumped over rough ruts or mired in mud holes. Good roads also keep the farmer optimistic and good natured—and prosperous. So we're all agreed that we ought to have more highways of this sort. And what's more, we're going to have them without delay if we make proper use of the tractors that now populate our country. Reliable tractor statistics show that the average farm tractor works only 58 days out of the year. That isn't enough. It ougnt to work at least 120 days. There are any number of farmers who own tractors in the Dominion who are not getting full value from their rigs at present because they don't keep their tractors busy. And then again there are quite a few farmers who, when they are through with the season's tractor work, hire out to the township officials or their Advisory Board on road work. This works to the farmer's advantage in two ways—he not only makes a nice profit from this form of custom work, but is also greatly benefited by the good roads that he is building, so he is "killing two birds with one stone." When he does custom plowing or threshing for his neighbors, he makes his due profit and wages from the work but derives no permanent benefit. But when he employs his tractor on road work, he is not only making immediate profit but is also performing an act of permanent benefit to himself and his neighbors.

This tractor is a splendid road type.

A tractor has certain advantages over horses in road work. For one thing, it does the work at one-half the cost that it could be done with horses—sometimes much less. For another thing, heavy road work requires lots of power and is a horse-killing job. In building roads there are often heavy roots to cut through, big stones to be dug up, and stumps to be pulled. And in the mountainous sections of the West, it is often necessary to gouge out the sides of mountains. This is slow work with horses—and this is an age of hurry-up progress when things have to be done quickly, cheaply and efficiently. The co-operative use of tractor between farmers and Canadian Advisory Boards should go a long way towards the development of good roads in the Dominion.

Often a farmer feels that he cannot afford to buy a tractor because he does not have enough farm work to keep it busy. If he could make arrangements to employ it on road work during periods when the tractor would otherwise be idle, he would not hesitate in placing his order. It is therefore to the advantage of tractor dealers to encourage farmers in soliciting this form of custom work.

AND in the same way, there are undoubtedly some Advisory Boards that do not feel justified in buying a tractor for road work even though they realize its need, owing to a lack of funds, due possibly to heavy expenditures for other improvements such as building new bridges over streams, etc. In such cases "turn about" would be fair play, and if it would not be a breach of policy, the Board could undoubtedly hire out the tractor to farmers for custom work between times, thus earning sufficient revenue to pay for the tractor and warrant its purchase in spite of shortage of funds.

For almost five years good roads development has lagged in Canada owing to more pressing matters to be looked after overseas. The Canadian Good Roads Congress has done yeoman service in pressing for the accomplishment of what work has been done. But now that we have finished that job, we must make up for lost time here at home. If the tractor will help us do this in the building and maintenance of good roads, let us get the tractors on the job by all means.

One county in the far West has been using tractors for road work for five years, having purchased two in 1914 and another in 1918. The officials estimate that the cost of grading and draining roads with these tractors averages $50 per mile, using one 7-foot and one 12-foot grader and an elevating grader where conditions permit. They have graded and drained a total of 690 miles of highway with this equipment, many miles of this being on mountain roads, the tractors working at elevations of from 4,000 to 5,600 feet above the sea level. In connection with this mountain work, these tractors have removed rocks weighing several tons and have pulled up trees and stumps to say nothing of digging out the sides of mountains.

As supplementary to their tractor equipment, the officials of this country also employ three motor trucks—one 1-ton capacity and two 2-ton. The trucks are used for hauling road and bridge material and oil and gasoline for the tractors as they sometimes operate many miles from the nearest base of supplies, this particular county embracing over 2,500 square miles of territory.

ANOTHER Western county has graded 500 miles of highway with one tractor and two 5-ton motor trucks, estimating the cost of this work at $1,000 per

The Toronto-Hamilton Highway is one of the best and busiest in Canada—would that there were more!

mile, which the officials consider much cheaper than doing the same work with horses.

Reports from other sections of the country show tractor road building costs as low as $16 and $20 per mile. However, costs depend largely upon the nature of the soil and general conditions. It is but to be expected that building roads in a new rough country or in a locality where the ground is dry and hard will cost more than in some other community where the soil is soft and loose, the ground level, and but few rocks or other difficulties of this nature to contend with. But in any event, the tractor's efficiency and economy as a roadbuilding factor has been proved conclusively in hundreds of localities where it has been used extensively for this purpose. Tractorized highways in rural Canada will add to the prosperity of our farmers, will promote progress, and agricultural development and expansion—and will make the Dominion a better place to live in generally.

Carry on with the tractors!

Dealers Can Make Money Selling Ditchers and Graders to Farmers

EVERY farm in every province in Canada should be equipped with a ditcher and grader. It was needed there before the plow. It is indispensable to any farmer who has farm ditches to make, old ditches to clean out, irrigation laterals to cut and keep clean, roads and lanes to grade and repair, leveling, filling or any kind of dirt moving work to do.

A ditcher is practical and economical and quickly pays for itself on any farm. Its first cost is not much and its upkeep practically nothing. It is simply

The Model 20 latest improved Martin with clogless hitch. Reversible and adjustable. All steel.

constructed and easily operated. There are no wheels, cogs or levers about it to wear out or break. Any 16-year-old boy can handle it. With reasonable care it will give many years of valuable service.

Proper drainage is the foundation of all successful farming. Without good drainage no farmer can hope to increase his crop yield or improve his land. Ditches can be cut with a ditcher and grader and the dirt worked out in one and the same operation and just as fast as a horse can walk. A good machine makes a perfect V-shaped ditch, any depth down to four feet with hard,, smooth banks, sloping at an angle of 45 degrees wide at the top and tapering to a point in the bottom. Such a ditch is the ideal ditch; its banks will not cave in readily, thus not requiring cleaning out as often as the ditch with the straight banks and in the end is much the cheapest ditch.

There are few farms but what have some old weed-clogged, hand-dug ditches that need cleaning out. When a ditch is soft and miry and horses cannot work in it, splendid results can be obtained by using a long evener and hitching a team at each end on opposite sides of the ditch.

This same plan can be adopted for making new ditches to drain swamps and low, level, flat land to permit the teams to walk on solid footing. Ditching used to be hard, dirty work, but now the drudgery has all been eliminated and ditching has become a pleasure instead. A mile of three-foot ditch in a day is a record easily accomplished. Just stop and consider how long it would take to do that much work by hand.

A ditcher fills a long-felt want in the line of road-working equipment—especially for road maintenance. It will do all the work of the larger, more cumbersome machines, requiring fewer men and less teams to operate and can be used in places where the heavier equipment cannot go such as close up to bridges, culverts, fences and down in deep roadside ditches. It can be transported across bridges and culverts without danger of crushing them as is so often the case when large, heavy power outfits are used.

Equipped with a special Road Drag Blade, a machine will work every inch of the roads from ditch to crown. The Road Drag Blade is interchangeable with the regular cutting blade and is fine for leveling, road dragging and crowning off the roads after the dirt has been graded to the centre from the side ditches.

Dealers can handle ditchers profitably, but in order to do so they must be prepared to do considerable educational work in their neighborhood and show aggressiveness. The Canadian Fairbanks-Morse Co. have issued very interesting and helpful suggestions to their agents who handle the Martin Ditcher and Grader. They advise their dealers as follows:

1.—Always have a good supply of the various models in stock. Keep several set up in a prominent place in the store and call the attention of the farmers to them at every opportunity.

2.—See that plenty of printed matter is on hand to distribute to prospects.

3.—Advertise a demonstration for a certain fixed date, either through your local newspaper or by means of the telephone, or other convenient methods, to get the farmers together. More can be learned from a few hours' actual test than by reading numerous pages of printed matter on the subject.

4.—Offer to let any good responsible farmer take the Martin out on 10 days' free trial and under a positive money-back guarantee. Satisfaction should always be guaranteed or money refunded.

Remember the Martin is a new implement on the Canadian market and, like everything else new, its

A good ditcher will enable the farmer to clean out his old weed-clogged, hand-dug, square ditch, and change it to a V-shape.

sale must be vigorously pushed. Here's a splendid money-making opportunity for the wide-awake live wire dealer, but it should not be undertaken in a half-hearted way.

PRODUCE 314,936 TRACTORS

WASHINGTON, D. C.—Official figures compiled by the United States Department of Agriculture state that during 1919 a production of 314,936 tractors is anticipated. During 1918, 132,697 tractors were produced, of which number 96,470 were sold in the United States, 36,351 were exported (Canada taking more than one-third of this number), and 15,401 remained on hand December 31, 1918. Almost exactly half of the tractors to be built during 1919 will have a belt horsepower maker's rating of 20 and 22.

LYNCH THIS JOKER

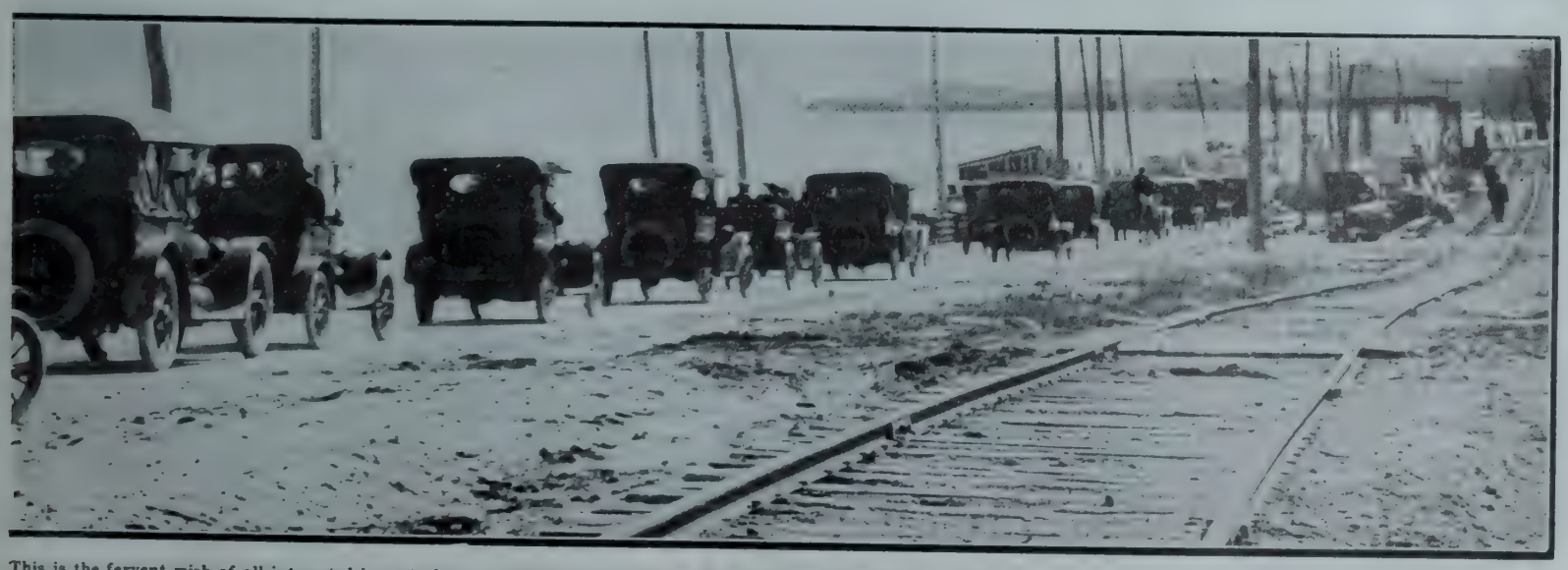
PASADENA, Cal.—Ford cars know their master's voice, according to Dr. T. B. Wright and A. F. Gartz, of Altadena. Henry Ford has but to speak to one and it will obey his slightest command, no matter how recalcitrant it may previously have been.

Mr. Gartz and Dr. Wright, who is a relative of Henry Ford, were driving down from Altadena in a one-a-minute machine when it suddenly stopped and, despite their united efforts, could not be started. The two Altadenans, bemoaning that they had not taken their twin-sixes, telephoned a garage and sat on the curb awaiting help.

Along came Henry Ford and his son Edsel, in the former's celebrated stripped machine of the same name. He stopped, viewed the machine. alighted, placed one hand on the radiator and said:

"Don't you know me, Lizzie?"

Then, declare the rescued men, Mr. Ford gave the crank of the Ford one whirl and the motor gleefully responded. It has not balked since.



This is the fervent wish of all interested in motoring. This photo was taken during a busy Saturday recently.

Feature Tractor Spark Plug Service

By O. C. ROHDE
Chief Engineer, Champion Spark Plug Company

AN automobile engine runs at full load and speed during only a very small part of its term of service. A tractor engine is running at full load practically all the time. Because of this and the fact that low-grade fuels are largely used in tractor engines, the problem of spark plugs for tractors differs to some extent from that of spark plugs for automobiles.

As a rule, the use of low-grade fuel means higher compression, higher temperature and more dirt and carbon. The last item is made still worse by dust taken in while working during the dry seasons.

It is impossible at the present time to recommend any one type of plug for tractor work. High temperature engines require a plug with an insulator which is exceptionally good electrically, can stand the repeated applications of high heat and at the same time not have enough of the central electrode exposed to cause overheating which may induce pre-ignition. An oily engine requires a plug having an insulator with unusually long shorting surface at the firing end.

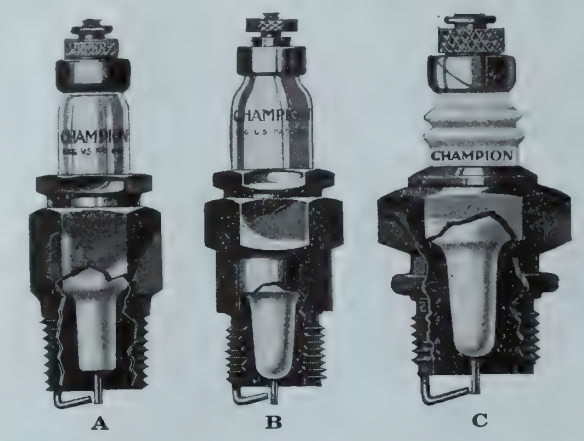
In spite of the great number of different plugs on the market, there are in reality just two types, those with petticoat or open insulators, and those with conical or closed insulators. The former can be recommended for the engines which show a tendency to foul up rapidly, while the latter are recommended only in case the extra extension of wire in the petticoat type shows a tendency to cause pre-ignition.

As a rule, the tractor owner and operator is safe in using the plug furnished with the machine by the manufacturer. Failure of one or two plugs on any particular machine should not be considered enough cause for a change to another type of plug. A few defective plugs do get out into service from time to time in spite of the utmost vigilance on the part of the plug manufacturer.

Troubles due to spark plugs may be divided into two classes—first, cutout or missing; second, pre-ignition.

A missing plug can usually be detected by shorting from the upper terminal of the plug to the engine with a screw driver. The miss may be caused by a broken insulator. If this is the case, the plug will miss fire pretty steadily both under load and while running idle. The only remedy in case of a two-piece plug is a new insulator and in case of a one-piece plug, a new plug.

THE miss may be caused by an insulator which is weak electrically. If this is the case, it will miss when under load but will recover when running idle. The remedy in this case is a new plug with a better grade of porcelain. In a case of this kind, it is not always necessary to get another make of plug, but to specify to the dealer that the very latest insulator is desired.



A B C

A—Two-piece plug — illustrating the Petticoat or open type insulator.

B—Two-piece plug — illustrating the Conical or closed type insulator.

C—One-piece plug—Conical type insulator.

The miss may be caused by fouling or surface short. By this, we mean that a continuous layer of carbon or other conducting material has been deposited on the lower end of the insulator and the spark is travelling through this instead of across the gap. A miss of this kind is usually intermittent for a while and finally the plug stops firing altogether. The immediate remedy is to clean the insulator or in case of a two-piece plug by taking it out of the shell and cleaning with gasoline and by scraping if necessary. Where plugs show a tendency to foul up in this way very rapidly, especially where a wet, shiny coating of oil is deposited, it is advisable to change to another brand of oil which in many cases will get rid of most of this trouble.

Pre-ignition may be caused by other things than the plugs. If it is severe, it sometimes manifests itself by a spitting back through the intake, but it is always accompanied by a loss of power. What actually happens is this: Some part of the material inside the combustion chamber—valves, carbon, plugs, etc., has become hot enough to fire the mixture before time for the spark. The piston is not yet at the top of its compression stroke when the force of this premature explosion tries to drive it back down. The momentum of the fly wheel carries it over for a while but power is of course lost. In case of pre-ignition, the engine should first be examined to see whether there is an excessive accumulation of carbon and whether there are any particles hanging loose on valves or spark plugs.

THE plugs should be looked over for rough edges on either wire or shell. If a petticoat plug is being used and no indications of this kind are to be found, it may be advisable to try a conical plug which very often will overcome the trouble, though it may need more frequent cleaning.

Always bear in mind that the tractor engineers have run through tests before deciding which plug to use. The spark plug they finally decide upon is the one they believe to be the best suited for their engine. When a new plug is needed, the tractor user should insist upon the same plug his engine was originally equipped with at the factory.

In general, the spark plug manufacturer is prepared to cope with the tractor plug problem and can furnish plugs to meet all present requirements. However, present day development in engines and fuels is so rapid that the material on the market is not always the latest obtainable. The dealers are learning to classify plugs for the various conditions of service and if the tractor owner will specify clearly just what the plug is to be used on, he should have no trouble getting just the plug he needs.

Tractors were seen recently rambling around the University of Toronto campus and were quite a novel sight in this locality. They were used to get the ground in shape after the soldiers had camped and trained there for several years, and also took a place in the training by the Soldiers' Civil Re-establishment Commission.

Build an Enduring Trade Success on Titan and International Tractors

International 15-30

Titan 10-20

International 8-16

A TRACTOR is useful only as it furnishes cheap, dependable power for all the other machines—drawbar and belt. The best tractor is the one that works with the most machines, wears longest, needs fewest adjustments, costs least to operate and gets all possible power out of cheap fuel.

Owning all these essentials, *Titan* and *International kerosene tractors* have, season after season, become a more familiar sight on farms the country over. Many a dealer has built an enduring trade success on these tractors as a foundation.

Whether out in the field doing a good job of plowing, disking, drilling, harvesting; furnishing cheap power at the belt, hauling crops to market, leveling roads, clearing land, uprooting trees, stumps and hedges, owners of these tractors are getting their work done in the most efficient way at the lowest possible cost.

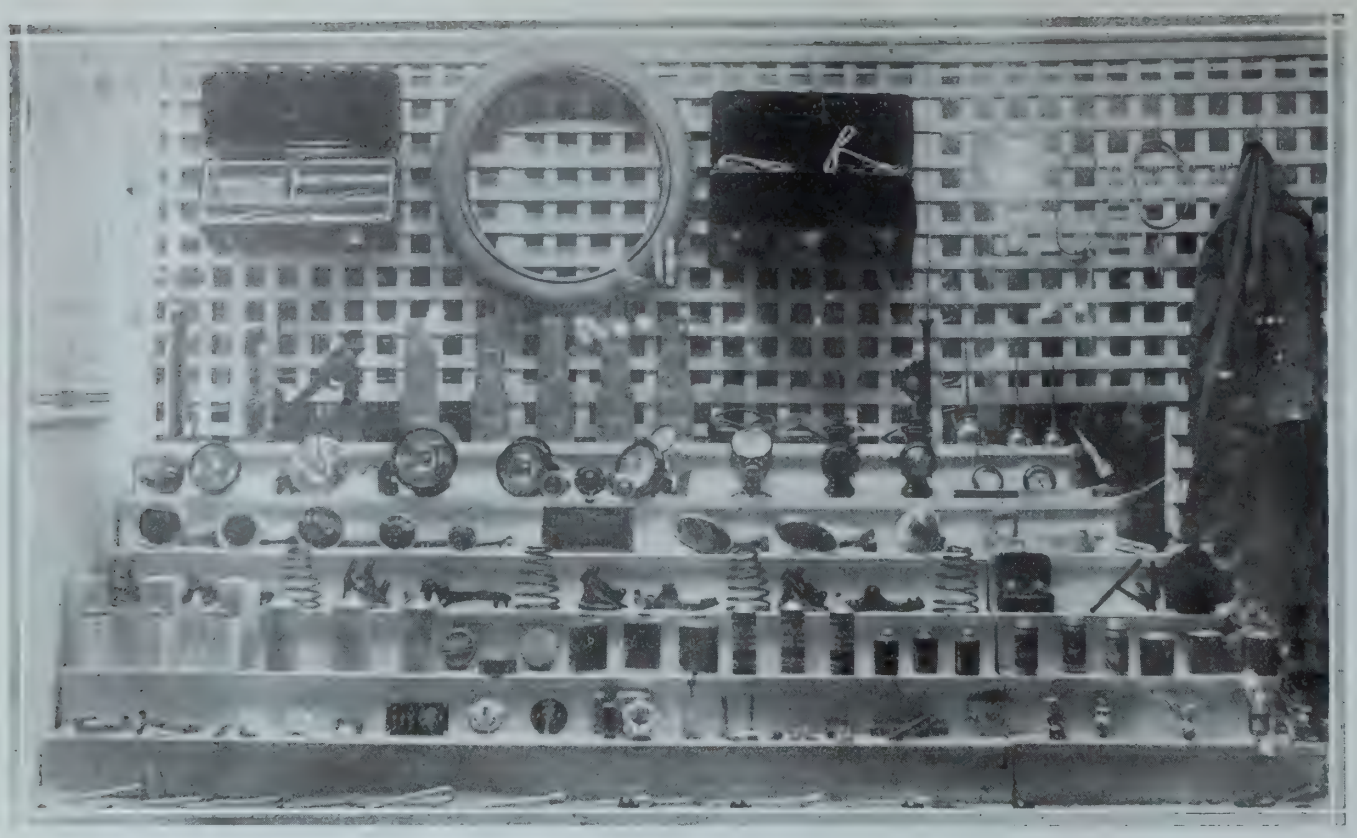
Right now, when rising markets call for large yields, sales in *Titans* and *Internationals* are rising. With the sale of one of these tractors you are able to furnish what every tractor owner must have—Service. When things are humming and your customers are geared up to the top-notch with a vision of a bumper crop ahead, to be without service is a serious matter. This is why we have 16 branch houses in close touch with local agents. The branch nearest you will not fail you, whatever the emergency.

Our tractors are made in three sizes—8-16, 10-20, and 15-30 h.p. All operate on kerosene, or any other oil fuel down to 39 degrees Baume. Full information may be had on application to the nearest branch as named below.

International Harvester Company
of Canada, Limited

Western Branches—Brandon, Winnipeg, Man., Calgary, Edmonton, Lethbridge, Alta., Estevan, N. Battleford, Regina, Saskatoon, Yorkton, Sask.
Eastern Branches—Hamilton, London, Ottawa, Ont., Montreal, Quebec, Que., St. John, N.B.

Dress *Your* Windows so they *PULL!*



There is a lot of trouble taken to make this window a real "pull," a genuine money-getter, but don't you think it's worth it?

THE large picture displayed on this page shows an interesting and varied window display, which at once attracts the attention of the passing motorist and compels examination. This window is to be seen in Winnipeg, Man., in the accessory store run by W. A. Templeton. Five years ago he did chiefly a hardware business, but now he is making his place a motor accessory headquarters. He advertises largely, reads trade papers, and changes his window dressing often. No wonder he's making lots of money!

The photographs at the bottom of the page depict two window displays advertising Black & Decker's portable electric drills. Drills are not usually considered easy articles with which to make up dressy windows. The use of a life-size cut-out in connection with portable electric drills is said to be a novelty.

The two pictures in the centre of the page illustrate what can be done with very little expense, and by exercising considerable care. The smaller picture shows how the window is built up.

J. H. Beynon, of the Goodyear Tire and Rubber Co. of Canada, Toronto, dressed this window and we asked him for figures as to cost. He says:

"This display requires one roll of wallpaper, No. 8423; the cost of this wall paper is $1.25 per roll. However, there is enough paper in one roll to make two displays. About five folds of white crepe paper are required for the floor, sides and back. These folds cost 15c each. One roll of orange streamer 1½" wide is for border of panels and one roll 2½" wide for fringed border of imitation rug. These orange streamers are 12 or 13 cents each. The total cost of this window amounts to $2.25.

"This window display takes quite a lot of time and care, but we think the result is worth it.

"The window which I used for setting up the display is 8 feet wide and 3 feet 9 in. deep. The size of window would not make much difference as long as it had two sides and a back."

Goodyear have a classy window, which brings out the effectiveness of a few articles, well placed. It costs $2.25 in cash—and a little effort.

The top shows the window when you start; the other two show stages of development. On this page you can read what it costs to do this.

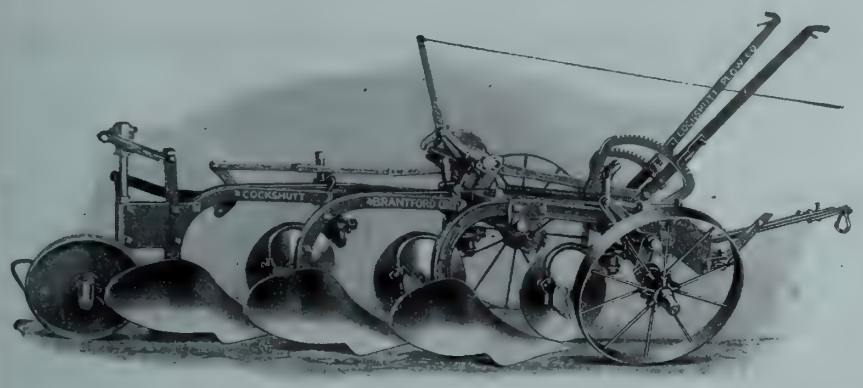
In this photo, which shows a window display of the Standard Supply and Equipment Co., Philadelphia, it is interesting to note the spiral motif carried out by the use of crepe paper. Advertising reprints and drill bits are scattered about effectively.

In the case of Chanslor and Lyons' window, San Francisco, the manufacturers' colored cut-outs are used with good results. The sectionalized drill is mounted, as will be noticed, on an attractive display board.

Any soil, any service successfully met

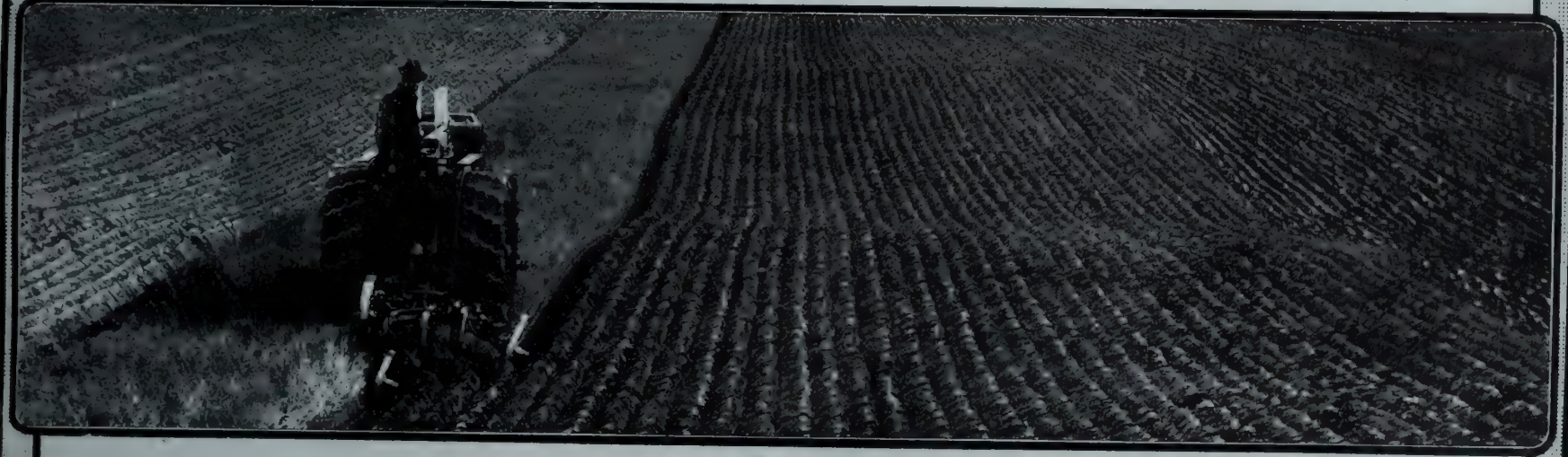
Why the Cockshutt Tractor Plow is a Success

Because it's made by a firm who have specialized for a lifetime in the making of high-grade plows to suit Canadian farming conditions. Because we've embodied in it scientific design, and the highest quality materials and workmanship which our close acquaintance with field conditions all over Canada shows us is necessary for this special type of plow to do its best work.



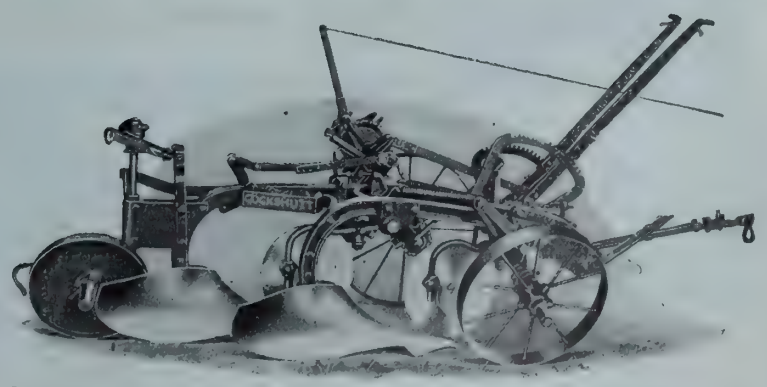
Cockshutt 3-Furrow Plow

Can be turned into a 2-furrow plow in a few minutes when conditions demand it. Cord within easy reach of Tractor operator's hand works automatic power lift, raising bottoms high and level when you want them out of the ground, and lowering them again when you wish. Easily operated levers are also conveniently placed for varying depth of cut. The hitch is instantly adjustable to suit any make of tractor.



Inseparable from Successful Power-Farming is the Cockshutt

Canada's farmers know there may be a diversity of opinion about which tractor to buy, but when it comes to a Tractor Plow—there is only one choice, the Cockshutt. It is widely advertised, widely known and widely popular.



Cockshutt 2-Furrow Light Tractor Plow --- can be quickly turned into a 3-Furrow Plow by the addition of a few parts

Remember, its the Plow that actually turns the ground. You may introduce a new Tractor but better stick to the Cockshutt Plow line—it's established—it sells itself. Let us send you our latest catalogues and folders.

Cockshutt Plow Co.
Limited
BRANTFORD, ONTARIO

Sold in Eastern Ontario, Quebec and Maritime Provinces by

The Frost & Wood Co.
Limited
Montreal, SMITH'S FALLS, St. John.

Depend on the Cockshutt Tractor Plow

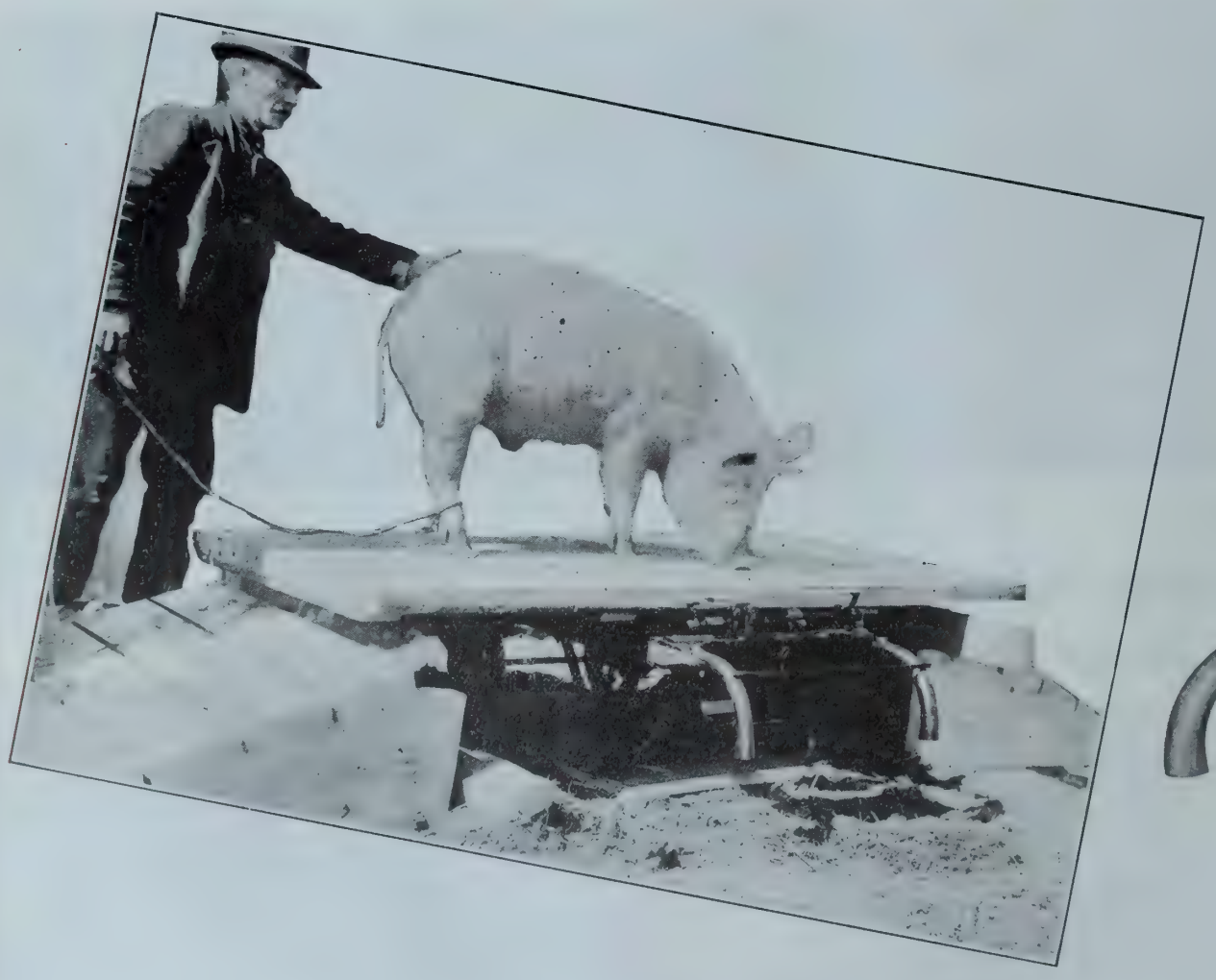
The Renfrew Truck Sca

DEALERS everywhere are reaping a harvest of sales. One man sold 800 scales in seven months. We will be glad to give you his name and that of many others who order from us in carload lots and sell them easily.

This Renfrew Truck Scale is so obviously a good thing for the farmer that, often as not, he buys it on sight.

This handy Renfrew Truck Scale enables the farmer to check up on both what he buys and what he sells. It enables him to see that he gets full weight and that he loses no profits.

It weighs anything and everything from 1 pound to 2,000 pounds. Its self-adjusting platform enables it to weigh accurately on uneven ground. It weighs equally as accurately on corners as in centre of platform.



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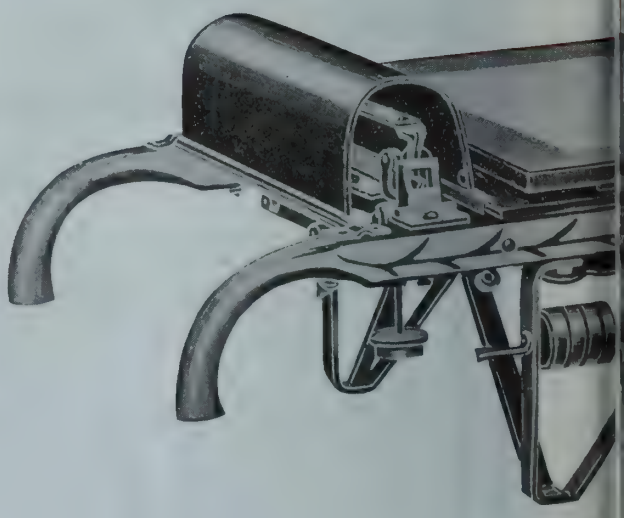
2000-lb T



The Renfrew Machinery Compan

Agencies Almost Everywhere in Canada

Other Lines: Renfrew Household Scales---Renfrew Cream

e Sells "Like Hot Cakes"

The farmer can place his full confidence in the accuracy of Renfrew weights. Every Renfrew Truck Scale is Government inspected and each scale carries a Government certificate of correct weight.

It is built strongly enough to carry a 3,000-lb. load yet it is not too heavy or cumbersome to wheel about like an ordinary truck.

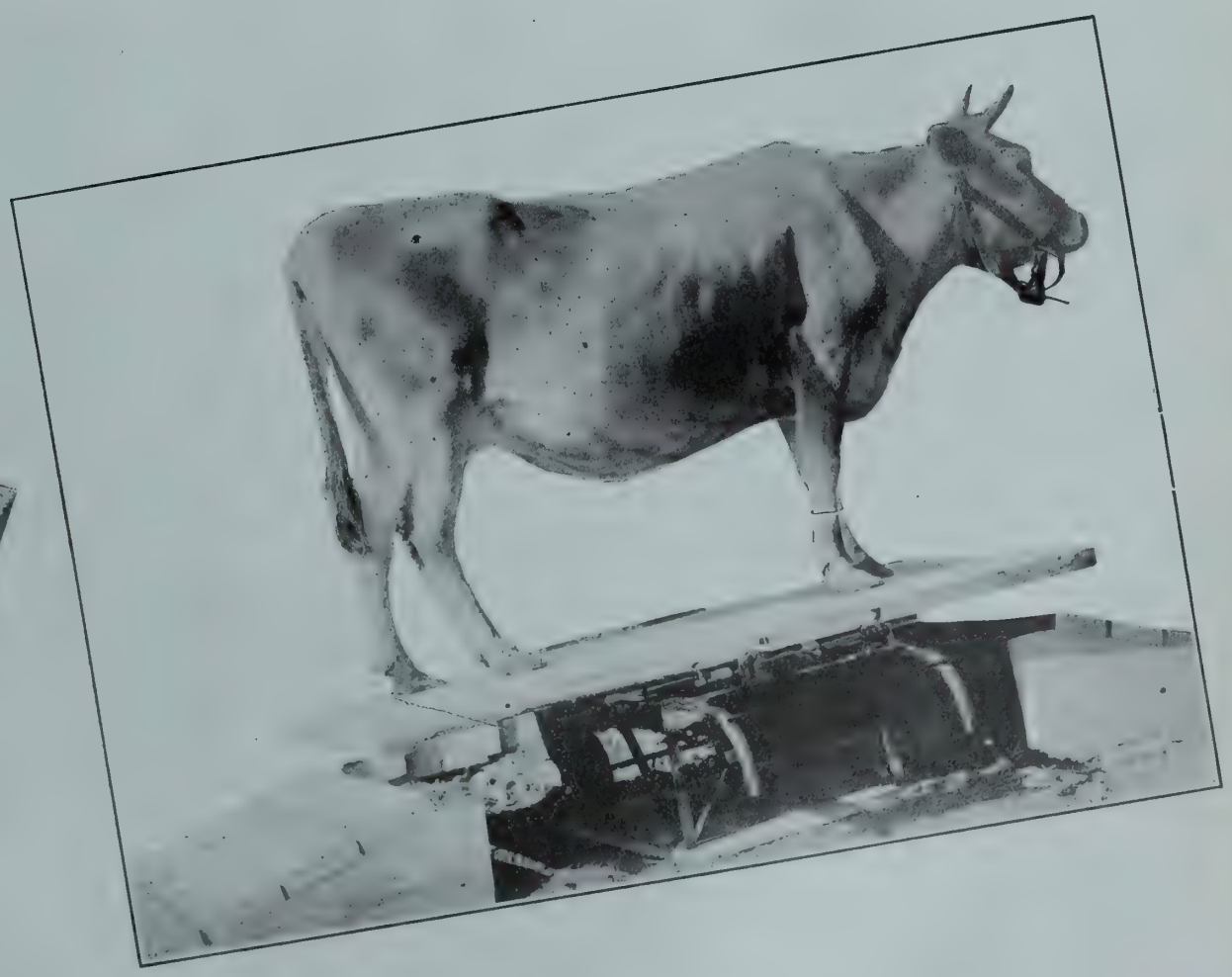
It is simple in construction and there is nothing to get out of order.

On many farms it pays for itself in less than three months. One farmer writes, "Just this morning I saved $20 on the sale of a few cattle and sheep."

Every dealer in Canada should handle this live seller. Our well-equipped factory can keep you well supplied with stock for quick turnovers. We have a handsome proposition for new dealers in open territory. Write for it right away. These agencies are being snapped up quickly everywhere in Canada.

frew

uck Scale



, Limited, HEAD OFFICE AND WORKS: Renfrew, Ontario

Eastern Branch - - Sussex, N. B.

parator---Renfrew Kerosene Engine---Happy Farmer Tractor

YOUR Repair Page: Ignition Troubles and Their Remedies—Lead Burning and Aluminum For Auto Work—Auto Top Dressing

This is the garage repairman's page—and we want YOU to help US make it useful. This page will be of real assistance to the man who is doing repair work in the small-town establishment—it will provide ideas for the man who has no one to lean on except himself.

We want ideas from small towns—because that's where some of the biggest originate! And we want metropolitan ideas as well. This department will be conducted by Scott I. Duthie, as canny a Scot and as good a mechanic as you'll meet from Halifax to Prince Rupert. But the items on this page will be written by several experts in their own line—by anyone who has an idea that can be put across that is new and practical.

Note two points:—

1. Should you have any problem that needs solving send "Scotty" full particulars and, if of general interest, it will be treated on this page. If you're in a hurry, and enclose a stamped, addressed envelope, you'll get an immediate reply.

2. Have you any new ideas for handling repair jobs? Have you devised any time-saving short-cuts in your shop which you think are new? Come across with them, and "Scotty" will send you $1 as a slight token of reward. Your idea may be worth hundreds of dollars to others. Some other man's may be worth hundreds to you! Send rough drawings and our artists will do the rest. It is not necessary that the idea shall be absolutely new—but it must be one not in general use in the repair shops of Canada.

That's all for this time.—EDITOR "M.T.I."

Conducted by SCOTT I. DUTHIE

ONE of the oldest and most reliable forms of ignition used on gasoline engines is the "Make and Break," and its great simplicity commends it to the average man; its simple construction also means simple repair in case of trouble.

When an engine with this trouble begins to miss, and is difficult to start, the very first thing to do is to take the ignitor from the engine and thoroughly clean the points that are snapped apart by the outside trigger. These should not separate when fully open more than, say, ⅛ of an inch and some a trifle less; as long as they make a clear break, even though it is much less than this, they will work satisfactorily, but they must break "clear." Sometimes the burnt oil and carbon accumulate on the stem of the rocking contact arm and make it "sluggish" in breaking. In this case the arm must be removed from the base and cleaned off with sandpaper, taking care to leave no grit on it when replacing. The hole in which it works must also be cleaned out and when the arm is replaced it should work absolutely free and break with a sharp snap, as the quickness of this break determines to a great extent the heat of the spark.

On this form of ignition there is always one contact that is insulated from the metal by means of mica wrapped around the stem or other form of insulation. Should this become oil-soaked or damp it will cause a "short circuit," which means that instead of the spark jumping across the contact points it will escape through the faulty insulation and so prevent the engine running or cause it to miss. Sometimes the same results will be obtained by a coating of grease and dirt on the outside of this insulated post. It must at all times be kept as clean, dry, and free from oil as possible. This is difficult in some styles of engines but by exercising a little ingenuity it can be done by means of deflectors for flying spots of oil and water.

The springs on this form of ignitor sometimes lose their temper and should be replaced by new ones, but unless the engine has been allowed to overheat very badly this will not occur for a long time and if the rocking arm is kept free in its guide, a very weak spring will operate it satisfactorily. The main points to be observed in the care of the ignitor itself are: Keep the rocking arm aosolutely free in its guide; keep the points clean but don't use a file; use sandpaper, as hardly anyone can file two small points and make them fit together over their whole surface and this is essential to a good spark; and keep the insulated post insulated, that is to say, keep it free from oil, dirt and dampness.

These are simple rules to follow and if they are carried out you will find an engine with this form of ignition very reliable and easy to start.

TRIPPER COIL BATTERIES

The only other apparati in connection with this ignition are a tripper, to trip the rocker arm from a half-time shaft, a coil and a set of batteries. The tripper must of course be set to trip the rocker arm a little before the crank reaches the top of the compression stroke, and the faster the engine is designed to run the more lead the ignitor must have. Or, in other words, the points must separate at a greater distance from the top of the compression stroke, so that the spark occurs sooner in the cycle of operations.

The coil is a plain primary coil which produces a higher voltage of induced current than that supplied by the batteries, but it has no outside adjustments, the only connections being two for low tension wires. This gives so little trouble that it is almost needless to mention it. Even should it burn out, and it will hardly ever do this unless it is badly abused, a new one is cheap and easy to install and needs no fine adjustment. Should you suspect the coil has laid down, an engine with this form of ignition could be run by connecting four sets, or say 25 dry cells, in series to the ignitor. This would give in the neighborhood of 35 volts and be sufficient to run the machine until a new coil could be procured. This, of course, would be too expensive as a steady thing but it might be worth a lot to know this and enable you to finish up a job that could not wait until a new coil was procured.

JUMP SPARK IGNITION

This system has the advantage over the "Make and Break" system inasmuch as it has no moving parts inside the cylinder. Its exponents claim it is impossible to keep moving contacts in good shape inside a hot engine cylinder.

This system consists of an ordinary spark plug, a spark coil with a vibrator and a timer to make the connection at the same time as the points on the make and break system would open, which is at or just before the top centre of the compression stroke of the engine.

The biggest source of the trouble in this style of ignition generally is to be found in spark plugs fouling up, but this is easily remedied either by cleaning, or, if the porcelain or mica insulation shows signs of cracks or is oil-soaked, replacing with a new one. A plug that continually gets foul should be replaced, as even though it may appear quite good, some defect is more than likely to be present in the insulation, and the quickest and best way is to put in a complete new plug. The points should not be set too wide as it must be remembered that it takes a much stronger spark to jump the gap when it is in the cylinder and under a heavy compression than it does when the plug is tested on the outside of the engine. Therefore, do not always suppose that a spark is taking place between the points in the cylinder because it does so outside. It must be a real husky spark on the outside, to be a fair spark on the inside. Bear this in mind as it is one of the most constant sources of trouble. Just because you get a spark on the outside, it doesn't follow that one is taking place on the inside. More than likely the extra resistance of the compression will make the current take a path through the insulation of the plug, if it is faulty at any point, than jump the two points that are under heavy compression of gases. This point cannot be impressed too strongly on all users of this form of ignition.

MAKING CONTACT

After the spark plug most trouble is caused by the apparatus used to make contact every alternate revolution of the engine—every alternate revolution because the engine only needs a spark every other revolution. This is usually done by means of a flat spring that is touched by a cam, or hump on a gear, driven from the crank, and the very fact of its being so close to the crank means that it is almost bound to be splashed in oil and grease. This is all right as the rubbing contact of the cam on the spring will keep it clean, but the oil will have a very bad effect on the insulation of the wire carrying the current to this timer, and a short circuit is likely to be found here more than in any other place. A "short" here will show up by the coil buzzing no matter whether the engine is in the firing position or not. Sometimes the leak of current is not enough to make the coil buzz but it would be enough to make a weak spark.

On a great number of engines, the wire used to the timer is just ordinary SINGLE STRAND electric light wire. The vibration of the engine will cause this single strand of copper to break in the inside of the insulation and yet make no sign of a breakage on the outside. This can of course be tested out by running a new wire, and when this is done, always use the multi-strand, low tension ignition cable as used on automobiles; by this means you will eliminate future trouble from this cause.

The constant striking of the cam on the spring will eventually weaken the timer spring, and a spare should always be in the tool box, for it not only weakens it but at times will break right in two. They are simple to put on "if you have them," but if you haven't got them you are laid up completely. If the spring has lost its temper it will not make good contact because it does not keep the cam clean, for the rubbing action is not heavy enough. Therefore, besides a spare spark plug you should always carry an extra length of insulation wire ready to put on and a timer spring. These are not very serious outlays and they will save you all kinds of delays and annoyances.

Like the make and break ignition, the coil if kept dry will give the least trouble of any part of the apparatus. To adjust it the engine should be turned over until the cam is just touching the timer spring or contact firmly, the switch put in and the adjusting screw on the vibrator bridge screwed back until there is no buzz; then screw it in until a STEADY buzz takes place and a bright, powerful spark shows at the plug. When doing this, always be sure and have the shell of the plug laid on a bright metal part of the engine; if you don't you stand a chance of burning out the high tension winding of the coil. Also, never test the spark by holding the end of the high tension wire away from the plug, as this will also more than likely ruin the coil. With these adjustments made, start up the engine and move up the adjusting screw of the coil *one notch at a time* until the engine runs steadily and even. If you cannot get it this way, apply a little pressure to the contact spring of the timer and if this does the trick, it is a sure sign that a new spring is needed for the old one set down to make firmer contact with the cam.

Keep the high tension wire that leads to the engine away from all metal parts, as even though the insulation may appear good, still the voltage carried by this wire is so high that some may escape when running and cause a weak spark at the plug and so cause trouble. Also never use single strand wire to carry the current to the plug. All electricity travels on the outside, or surface of a wire and the surface of a single strand is not nearly as large as the surface of a similar cable made up of a large number of fine strands. Consequently, the large solid wire offers far more resistance to the flow of current than a wire of equal diameter made up of fine strands.

It follows of course that all terminals and connections must be bright and clean and free from corrosion.

MAGNETO IGNITION

The latest form of ignition to be used on engine is magneto ignition, and this is proving a very good form of ignition as it cuts out so many loose wires, for as a rule there is only the one wire leading direct to the ignitor or spark plug. The secret of successful operation of all forms of electrical machinery appears to be in using as little oil as possible without causing undue wear on the bearings. Too much oil is fatal and only high grade oil, of the kind stated in the instructions that go with each machine, should be used. It should be kept in a separate oil can and applied only WHEN NECESSARY, which at the most is twice a week should the machine be constantly running or at greater intervals if the machine is only running intermittently.

IN AUGUST

Next month look for our article on carburetors and mixers for gas engines and tractors. Probably you know what a "bad actor" the mixer can be at times.

The next important rule to follow is to keep the small contact points clean and smooth. Sometimes these do not set exactly on top of each other and a small ridge will develop where one does not touch the other. This should be taken off with a very fine file as it will spoil the contact at high speeds and cause misfiring. It is almost impossible to get a perfect contact with a file, so if the points have been abused or worn so that they do not make a perfect contact over the whole of their surface, it is much better to replace them than to try and fix by filing. It takes a man of many years' experience to fit two such small points so that they make contact over the whole of their face and it stands to reason that anyone not specializing in this work can hardly hope to accomplish this with the run of tools usually found in a repair shop. The points are not a serious item and they are the only cure for poor operation as a rule.

The small cam that opens and closes the points should have a litle vaseline smeared on it occasionally or a spot of fine oil, but the vaseline is better as it does not tend to "throw off" as oil does and so foul the contact points.

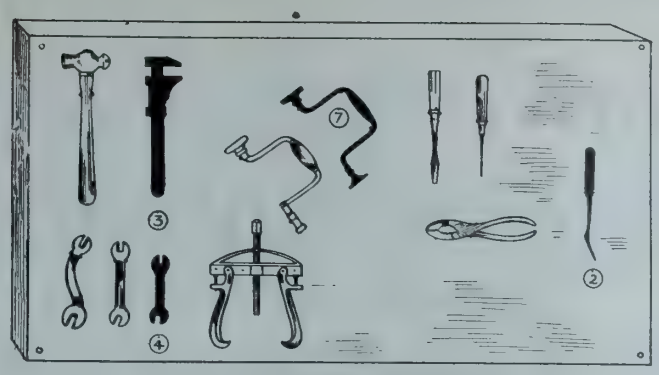
DAMPNESS ONE TROUBLE

Dampness of course, is just as much an enemy of a magneto as of any other form of electrical apparatus and it must be protected from flying spray. Even though the makers of some machines claim that they are water-proof, do not depend on this too much, for an ounce of prevention is far better than a pound of cure; in other words it is better to spend a few minutes taking proper care of your electrical apparatus than to spend hours trying to get a spark or start your engine.

On some, or rather most, of the present tractors, four-cylinder engines are used and if you should be called out to locate trouble on the ignition system first trace up the wires and see that they are connected to the right plugs. Many hours have been spent in vain work and lots of useless cranking done through this little fault. Many farmers appear to think that if there is a wire on every plug everything is bound to be O. K. They take the plugs out to clean them and stick the wires back any old place they will go. Look out for this trouble first; if they are all off when you get there and you do not know which is which you can easily find out in the following manner:

Take out the spark plugs and slowly crank over the engine until the INTAKE VALVE of No. 1 cylinder closes, take about another half turn and see which one closes next, and so on until you have seen the order in which they close. For instance, number one is just closing, give the engine nearly half a turn and if No. 3 is just closing that will be the next to fire, or if it is No. 2 that is just closing, why that will be the next one to fire and No. 4 ALWAYS fires third on a four-cylinder engine, so we know that if No. 1 closes, then No. 3, that the firing order of that engine is One, three, FOUR and as only two is left that must fire last. If on the other hand No. 2 closes next to No. 1, then the firing order will be One, two, FOUR AND THREE (because Four ALWAYS FIRES THIRD).

So much for finding the firing order. Now we require to find the firing POSITION. Crank the engine until the intake valve of No. 1 is JUST closed; crank her half a turn and on looking at the magneto it will be found that one of the segments to which the wires are connected is just coming on to contact or is right on it and the points are just about to open; this is the wire that must be connected to No. 1 cylinder; and if the firing order is 1342, give the engine another half turn and it will be on another contact; the wire leading to this must be connected to No. 3 cylinder; the next segment of course will go to No. 4 cylinder. and the remaining one to No. 2. Of course, if this firing order is 1, 2, 4. 3 the process will be governed to meet the difference. This may sound complicated on first reading, but if it is read in conjunction with the actual work on the engine it will be found quite simple and it would be a good plan on receiving a new make of machine to go over the wiring system and become thoroughly familiar with it so that should trouble develop later, you will KNOW how it was set when it arrived from the factory and was right.



An idea from Pincher Creek, Alberta.

Frank J. Marwood, Pincher Creek, Alta., has put the accompanying novel and useful idea into practice:

His shop is not large enough to have a separate tool room, and a large board, painted white, is used to hang the tools on, there being nails sufficient to hang each and every tool outside the kit that the mechanic carries. The shape of each tool is painted in red exactly where the tool hangs, so that a glance will tell where the tool belongs. A nail under each tool allows the mechanic's check to be hung up when that man has the tool out.

3, 4 and 7 show where the mechanics' checks are hanging, showing who have the tools. 2 shows the red paint under each tool.

Lead Burning and Aluminum for Auto Work

LEAD burning consists in melting the metals and causing the parts to flow together and become joined without the aid of solder. It requires considerably more skill than any other form of brazing or soldering. A long step toward success may be taken by the proper arrangement of the work. It is usual to provide something which may serve as a mold or guide for the melted metal. For example, if two lead sheets are to be united by soldering, they are laid on a sheet of some non-heat-conducting substance, such as brick or asbestos. The work in the immediate neighborhood of the joint is carefully scraped so as to remove all oxide or scale which would tend to bind the melted lead and prevent it from flowing freely. The metal at the seam is heated by a very hot bit or the flame from a blow-pipe so that there is a uniform flow of lead across the seam. It is sometimes necessary to add more lead to the seam by melting a strip held in the hand. A flame of some sort is the most satisfactory source of heat for the average lead burning job, because not only is the heat more uniform, but also more intense, and the lead melts at the desired point before the surrounding metal becomes sufficiently hot to soften. There are several types of blowpipes for this purpose on the market. Some employ an alcohol flame, while others make use of mixed hydrogen and air. The flame is usually small, sharp-pointed, and very intense. Lead burning is absolutely necessary, and is insisted upon in certain classes of work, for instance, in lining tanks with lead for chemical solutions, or for joining the grids and lugs of storage batteries.

GREAT CARE NECESSARY

Many components of the motor car are made of aluminum and in making repairs, if these be broken or cracked, this metal is extremely difficult to solder. While many attempts have been made to solder aluminum in the ordinary way, and even with special fluxes and solders, but little success is obtained unless the conditions are fully appreciated. Aluminum is very light and melts at comparatively low temperatures, and because of its rapid oxidization it is necessary to take great care to secure bright metal to which the solder will adhere. The alloys with which the motorist has to deal vary in proportion of alloying elements, depending upon the use for which the metal is intended, the substance commonly used in combination being zinc, copper, tin, manganese, magnesium, and sometimes a trace of iron. The larger proportion of any alloy is aluminum, and on the whole the soldering problem will be about the same in all cases. As must be obvious because of its low melting point, aluminum will not stand prolonged heating, a condition that may be disregarded in the case of most of the other metals amenable to soldering and brazing processes. Then again, when the critical point is reached in the heating, aluminum suddenly "wilts" and every precaution must be observed to prevent the metal becoming too hot. The following table will show the relative melting points of the common metals: Tin, 445F.; lead, 620; zinc, 780; aluminum, 1160; bronze, 1690; silver, 1730; gold, 1900; copper, 1930; cast iron, 2000; steel, 2400; wrought iron, 3000; platinum, 3230.

From this it will be evident that the metals of which the average solders are composed have melting points but little lower than that of aluminum, and careful manipulation will be necessary to insure heating the metal sufficiently to melt the solder, and at the same time not weaken the aluminum or cause it to flow. To successfully solder aluminum demands considerable preparation and careful manipulation, and authorities differ as to the best methods and solders to use. All agree that the metal must be dry and absolutely clean, and while this is easily said and advised it is difficult of accomplishment. If one cleans aluminum in ordinary temperatures,, no matter how carefully, and obtain a bright surface, it is imposible to retain this as new oxide forms on its surface as soon as brightened. For this reason, some skilled in the art recommend immersing the parts to be soldered in a strong solution of hydrosulphate of soda for several hours before joining them. The best solder to be used depends to a certain extent upon the alloy of aluminum, the same as with other metals. One that has been used with great success is made as follows: Ten parts each by weight of tin, cadmium and zinc and one part of lead, all of which are melted together.

Dampness or salt air is the bane of the process of aluminum soldering, and the rapid oxidization makes "tinning," which is of such benefit in uniting other metals, practically impossible. As moisture will hasten oxidization, the safest method of proceeding will include the drying of the surface, assuming that these have been properly prepared, as well as the solder, in an oven or other suitable container at a high enough temperature to thoroughly heat all parts, but lower than that required to melt the solder. When the parts are thoroughly dry, the next thing to do is to scratch the surfaces vigorously with a metal brush, bringing out the untarnished metal, and removing all traces of the oxide. The next step is the heating of the aluminum parts nearly to the melting point of the solder, and after applying the alloys to the surfaces, brush it into intimate relation with the surfaces, using the metal brush. If the solder does not adhere, there is still some oxide on the surface, and the operation of cleaning should be repeated. When the surfaces to be joined are properly coated with solder, the rules which govern ordinary soldering work will apply, it being merely necessary to heat the surfaces, melt the solder and join the surfaces. Either a bunsen burner or blow torch can be used to heat the metal, and the important points to remember are that the work must be done quickly and that the surfaces to be joined be as clean and dry as possible and as free from aluminum oxide as conditions will permit.

If the surface is of such a shape that it cannot be readily cleaned by scraping, it can be cleaned by dipping it into a solution of nitric acid in three times its bulk of hot water containing about 5 per cent. of commercial hydrofluoric acid. This causes a slight action on the surface of the metal as shown by bubbles. Rinse the metal after removing from the acid bath and dry in hot sawdust. There are various compounds on the market for soldering aluminum, but this operation depends more on the workman than on the solder, and unless considerable experience has been had it is probably better to purchase solder than attempt making it. Zinc can be used, but does not form a very strong joint. Tin can also be used, is more nearly the color of aluminum, is stronger than zinc, but is very difficult to work. A small proportion of phosphor tin added to pure tin makes it work more readily and is the basis of most aluminum solders. The chief difficulty in soldering aluminum is that the heat is dissipated so rapidly that it cools the soldering iron, and furthermore aluminum oxidizes instantly upon exposure to the air. This extremely thin film effectually prevents a perfect union being made. If the parts are well heated and melted solder kept hot while the iron is allowed on it, the surface can be scraped beneath the melted solder by the point of the soldering iron, thus preventing to a certain extent the oxidization. In this way the metal can be tinned. When both parts are brought together and are well tinned, they can be united with some chance of success, nitrate of silver, resin, or zinc chloride being used as a flux. A soldering tool of nickel gives more satisfactory results than a copper one, as the latter allovs with the tin and soon becomes rough.

DRESSING FOR AUTO TOPS

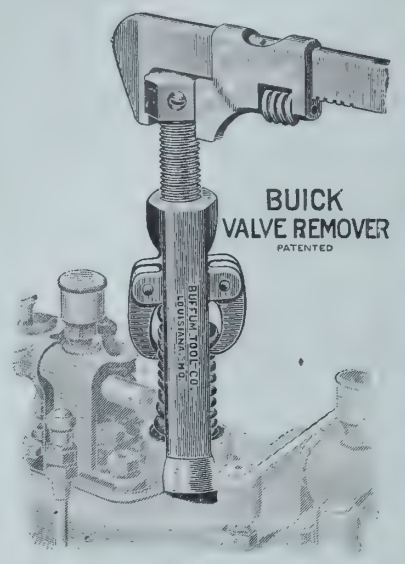
Automobile tops made of artificial leather are apt to crack, if the castor oil used for flexibility dries out of the composition. The result is a leaky top, and some of the varnish gums on the market do not always make the repair job a permanent one. A reliable preparation is made as follows: Mix 1½ oz. of castor oil with ½ gal. of solvent made of equal parts of amyl acetate and denatured alcohol; dissolve in this 4 oz. of colorless transparent-celluloid clippings. If the top is to be colored black, add aniline dye soluble in alcohol. The celluloid clippings can be obtained at any automobile-repair shop, where this waste accumulates. A reasonable degree of caution must be exercised in handling the chemicals, as they are highly inflammable.

Automotive Accessories *and* Implement Equipment

VALVE REMOVER

THE Buffum Buick Valve Remover, manufactured by the Buffum Tool Co., Louisiana, Mo., is said to obviate the use of crowbars and screw-drivers which have been the usual means for removing the valve assembly from Buick motors. It removes the entire "valve assembly" without breaking the top guide from the valve cage or sending the spring and stem.

Applies the pressure directly underneath the cap washer and key. The pull is delivered "straight up." It fits Buick motors of all models since 1912.



MOLDED CLUTCH FACING

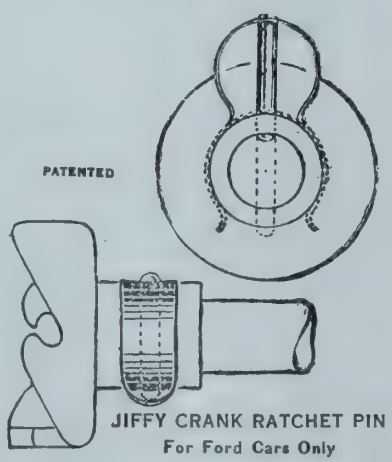
THE Raybestos Molded Disc Clutch Facing is composed of pure asbestos with a suitable binder, molded under pressure, insuring absolute homogeneity and accuracy quite impossible with the wooden type of facing, which was composed of asbestos spun around a composition wire (the wire to give the required tensile strength), this in turn woven into tape, subsequently formed into a ring.

One great advantage of the Raybestos Molded Facing is that it can be made endless, which is not practicable in the manufacture of Woven Facings heretofore used by clutch builders and users. It is made in Bridgeport, Conn.

Molded Disc Clutch Facings

CRANK RATCHET PIN

WHEN a crank ratchet pin requires replacement it takes two men about one-half hour to put in a new one and rivet it in place. Sometimes you have to take off the radiator. "Jiffy" Crank Ratchet Pin slips into place and a steel spring which comes already riveted to the pin clamps around the shaft and holds it. The pin slips in as easily as you would stick a pin through this paper. NEVER COMES OUT UNLESS YOU PULL IT OUT. NEVER WORKS LOOSE. The manufacturers are American Auto Products Co., Washington, D.C.



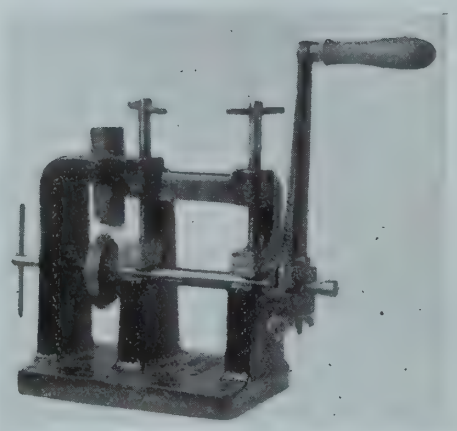
JIFFY CRANK RATCHET PIN
For Ford Cars Only

WINDSHIELD CLEANER

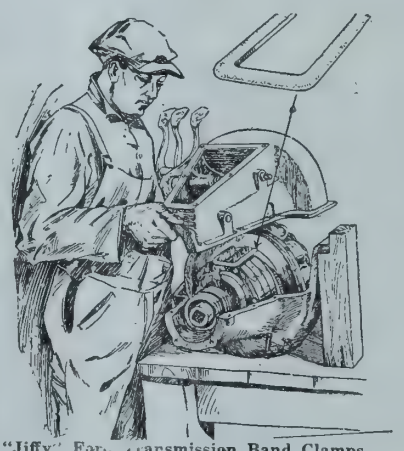
THE Outlook Co., Cleveland, O., have placed on the market a windshield cleaner which is said to secure the driver an excellent vision in any type of weather. It has a close-fitting non-rattle bracket, adjustable rubber wiper, adjustable rubber roller and spring-steel tension bar. There is a type for every one. It can be quickly and easily attached to the frame.

JERICHO WHISTLES

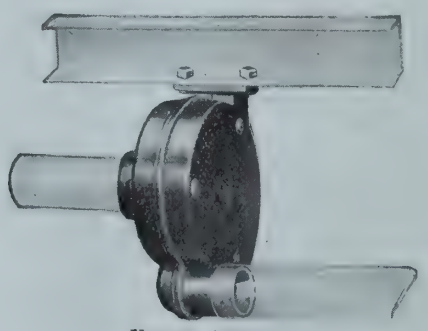
TWO new numbers of the Jericho family are announced by the Randall-Faichney Co., Inc., 76 Atherton St., Jamaica Plain, Boston, Mass.—Jericho Jr. and Jericho Pet Whistles. The former can be attached to the exhaust manifold or exhaust pipe. The latter may be attached to the priming pet cock hole or to a priming spark plug hole. Both are operated from the driver's seat by pulling a cord, and are actuated by the waste from the engine.



Tractor Valve Facing Tool



"Jiffy" Ford Transmission Band Clamps.



Vacuum Muffler.

STICKIT

VALVE FACING TOOL

THE American Valve Tool Mfg., Co., 354 West 50th St., New York City, announces a new TRACTOR VALVE FACING TOOL which will accommodate valves having up to 6½-in. heads and stems up to 1 in. in diameter.

The tool is a counterpart of the regular facing tool as illustrated except that it is four times the size, and all parts made accordingly—the cutting tool being made from the best quality steel 1¼ in. in diameter, oil tempered and ground. This new tool will be furnished equipped with cutter of either 45, 30, 60 or 90 degrees, as desired.

The list price of this tool is $12, with discounts to the trade.

TRANSMISSION BAND CLAMP

THIS clamp is used to hold Ford transmission bands in position while replacing the transmission cover. It is made of spring steel of exact dimensions and is clamped around the lugs on the transmission bands and removed after the cover is in place.

It is manufactured by American Auto Products Co., 1319 L Street, N.W. Washington, D. C.

VACUUM MUFFLER

THIS is a scientifically made silencing device, and enables the engine to deliver the exhaust gases almost unimpeded. The Vacuum Muffler is strong, compact and cannot rattle or shake loose. It weighs but six pounds, and is so constructed that it cannot collect and hold the exhaust gases; therefore it is *absolutely guaranteed blow-out proof* and when once installed will outlast the car.

The manufacturers, the B. E. Motor Engineering Co., 50 East 42nd St., New York City, say that about 20 trucks being made in the U.S. are now being equipped with this muffler.

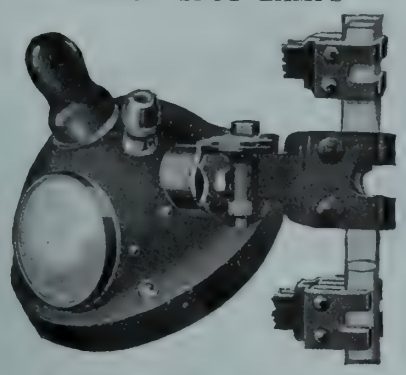
STICKIT WRENCH SET

THE Stickit Wrench Set, manufactured by the Bay State Pump Co., Boston, Mass., consists of a double-ended ratchet wrench, for operating seven strong stamped steel sockets strung on a square steel shank. One end of the wrench fits the shank, the other the sockets. The wrench also fits four sizes of nuts, and, with the sockets, eleven different sizes of nuts and cap screws. One end of the shank has fitted to it a 1¼ in. ball which is easily removed as desired. The sockets may then be slid off the shank. The other end of the shank has a ball stop and a spring ball for holding the socket in use in place. It is not necessary to remove all the sockets from the shank in order to use it, although it can be done in an instant. The complete set takes up no more room than a large screw driver, and can be rolled up with the other tools.

C. G. E.
Automobile Accessories
"Tested for Service"

All Automobile Accessories carried in stock in our warehouse are articles of tested worth and can be relied upon to give the utmost satisfaction under the most trying conditions:

VICTOR SPOT LAMPS



High-grade and moderate priced. Door has rounded edge and fastened in place with push button lock. Has 3-inch mirror on back. The switch is of the off and on non-detachable type, locked in socket. Bulb, C Mazda, Nitrogen, G-12, 21 candle power 6-8 volt. Outside diameter of door, 7 inches.

Price .....each $7.00

KOPPER KING SPARK PLUG

Copper covered Asbestos cushion the porcelain, protecting it from the mashing hammer-like blows of the exploding gas mixture.
The Kopper King is a heavy duty plug which can be safely used on Tractors.

EVEREADY PORTABLE SEARCH-LIGHTS

Every automobile owner should carry one of these flash lights in the pocket of his car. They are strong, well made and powerful and are indispensable when changing a tire at night.

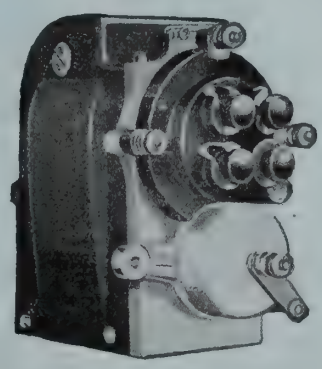
ATWATER KENT IGNITION
TYPE K-2

FOR VERTICAL MOUNTING

WITH MAGNETO BASE

Type K-2 consists of a Unisparker coil and switch, with automatic spark coil. Can be mounted vertically or equipped with a magneto base.

DIXIE HIGH TENSION MAGNETOS
MODEL 44



These Instruments are Ignition Systems in themselves, requiring no outside batteries, coils or other parts. The only item used with them being a small snap switch for stopping the motor when running, as illustrated.

MULTIBESTOS BRAKE LINING

Is solid multiple woven on special looms by special processes. It is made of the highest grade and longest fibre asbestos to be found in the World's markets, and contains a larger percentage than most brake linings.

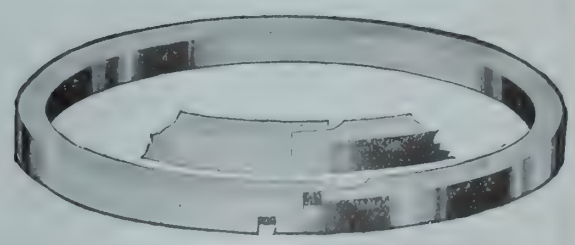
BOYCE MOTO-METER

A scientifically made Motor Heat Gauge. Attached to the radiator cap of automobile, truck or tractor, it accurately registers the condition that the engine is operating in.

LOCKTITE PATCHES

Locktite is a cold patch that will repair any size cut in tires. It can also be used as an emergency repair for blown-out casings. Repairs can be made in five minutes by any one.

GILL PISTON RINGS



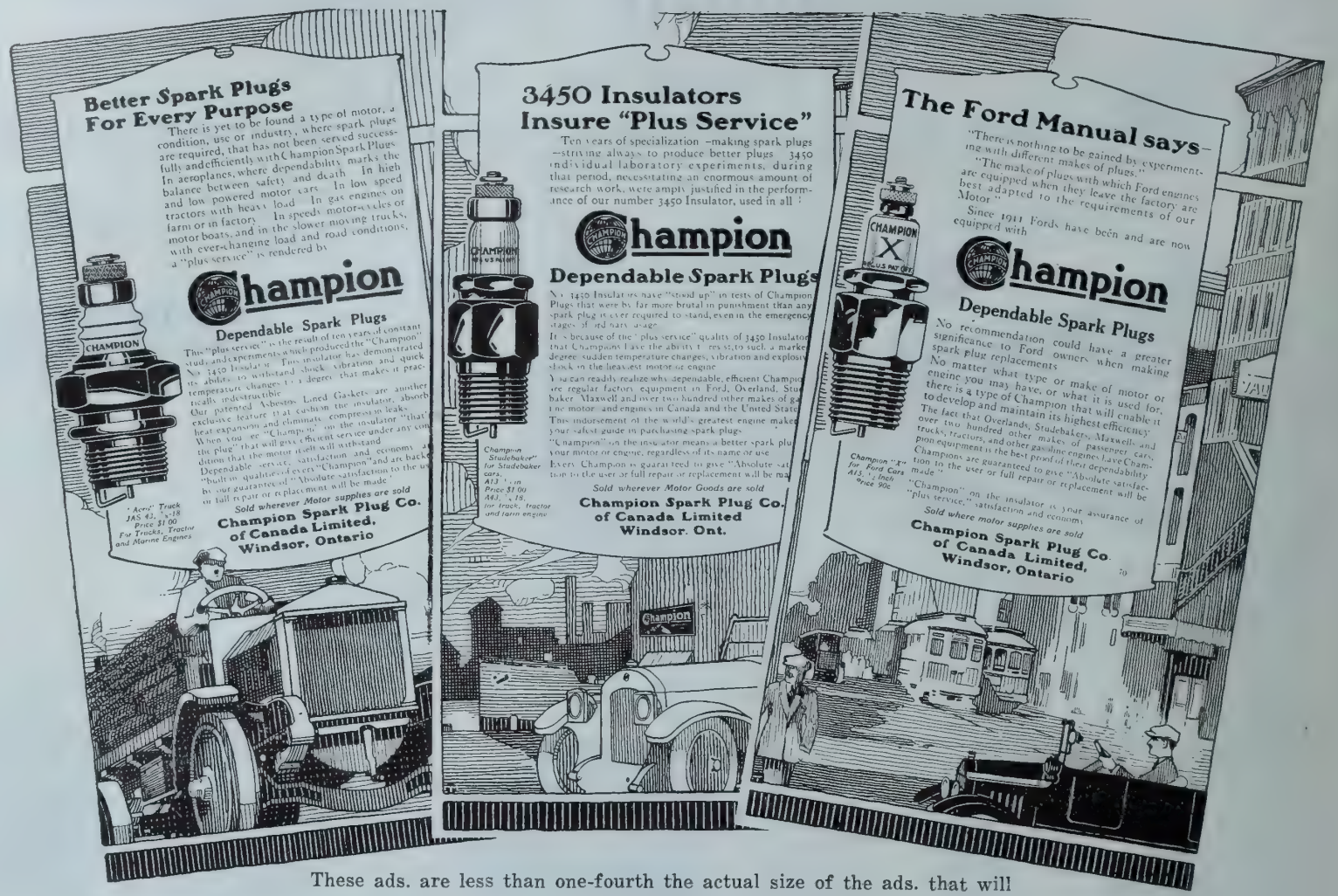
The Gill Piston Ring is a one-piece concentric piston ring made from an individual casting of fine gray iron. Every Gill Ring is guaranteed to increase power, prevent smoking and to reduce gasoline and oil consumption. The best piston ring made for tractors.

WRITE FOR NEW 1919 AUTOMOBILE ACCESSORY CATALOGUE

Canadian General Electric Company, Limited

Head Office - TORONTO

Branch Offices: MONTREAL, QUEBEC, HALIFAX, SYDNEY, ST. JOHN, OTTAWA, LONDON, COBALT, SOUTH PORCUPINE, WINNIPEG, CALGARY, EDMONTON, NELSON, VANCOUVER and VICTORIA


Better Spark Plugs For Every Purpose
There is yet to be found a type of motor, a condition, use or industry, where spark plugs are required, that has not been served successfully and efficiently with Champion Spark Plugs. In aeroplanes, where dependability marks the balance between safety and death. In high and low powered motor cars. In low speed tractors with heavy load. In gas engines on farms or in factory. In speeds motor-cycles or motor boats, and in the slower moving trucks, with ever-changing load and road conditions, a "plus service" is rendered by
Champion
Dependable Spark Plugs
Sold wherever Motor supplies are sold
Champion Spark Plug Co. of Canada Limited, Windsor, Ontario
3450 Insulators Insure "Plus Service"
Champion
Dependable Spark Plugs
Sold wherever Motor Goods are sold
Champion Spark Plug Co. of Canada Limited Windsor, Ont.
The Ford Manual says—
"There is nothing to be gained by experimenting with different makes of plugs."
"The make of plugs with which Ford engines are equipped when they leave the factory are best adapted to the requirements of our Motor."
Since 1911 Fords have been and are now equipped with
Champion
Dependable Spark Plugs
Champion Spark Plug Co. of Canada Limited, Windsor, Ontario

These ads. are less than one-fourth the actual size of the ads. that will appear.

These Advertisements will Help You Sell

Champion Dependable Spark Plugs

Every reader of these advertisements is a prospective customer of the dealer who carries the full line of Champion Dependable Spark Plugs.

More than 35,000,000 Champion advertisements will carry the story of Champion Dependability to owners of automoblies, trucks, tractors, farm engines, motor cycles and motor boats from coast to coast.

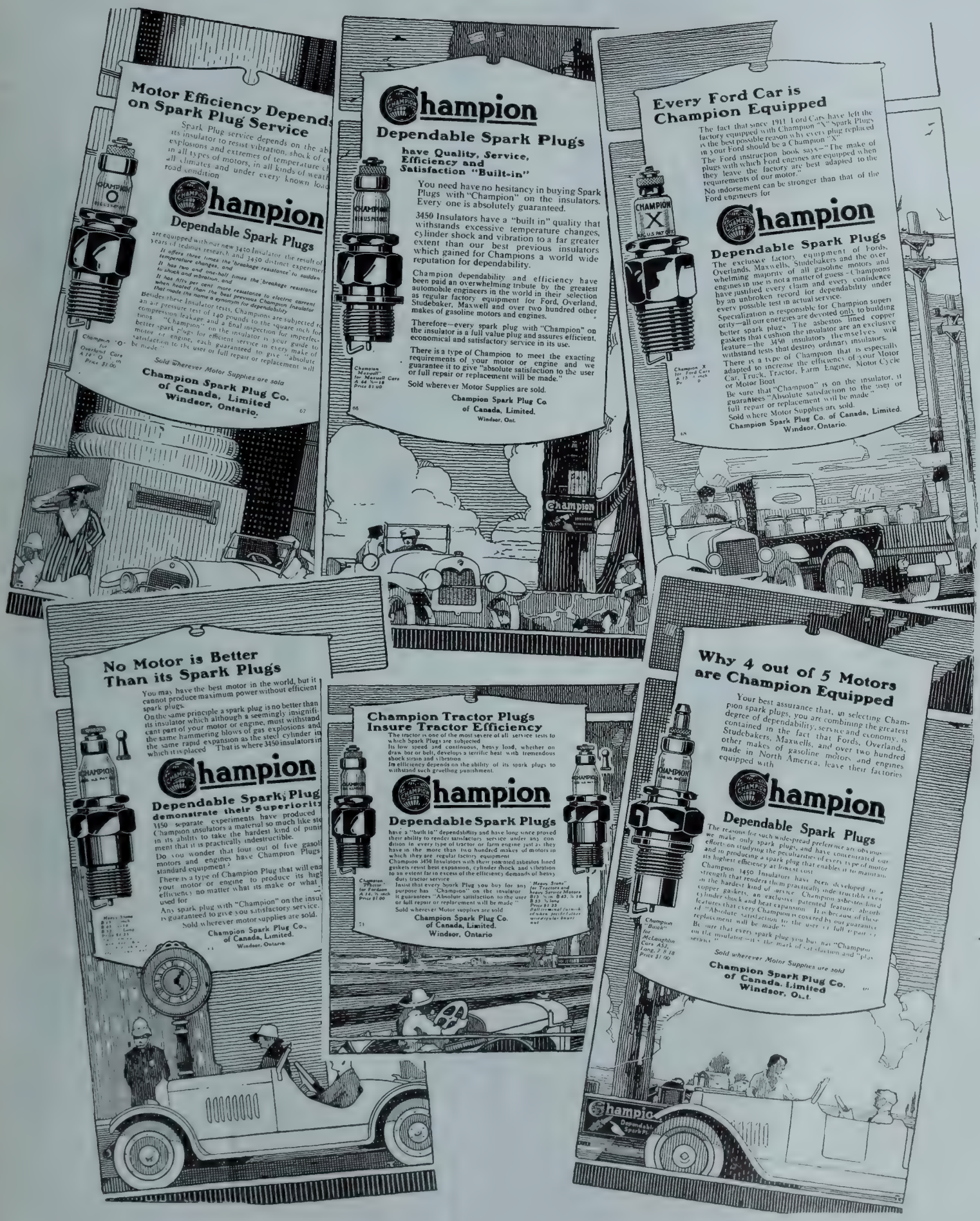
There is a Champion Spark Plug for every type and make of gasoline motor or engine, each one equipped with our 3,450 Insulators—each has our patented gasket construction and each is guaranteed to give "absolute satisfaction to the user, or full repair or replacement will be made."

Can you afford not to sell Champions? Get your stock into shape and receive the full benefit of our big sales promotion effort as shown in this excellent series of advertisements.

They are business builders and profit makers. **Order from your jobber.**

Champion Spark Plug Co., of Canada, Limited

WINDSOR, ONTARIO


Motor Efficiency Depends on Spark Plug Service
Spark Plug service depends on the ab
its insulator to resist vibration, shock of c
explosions and extremes of temperature
in all types of motors, in all kinds of weath
all climates and under every known loa
road condition
Champion
Dependable Spark Plugs
are equipped without our new 3450 Insulator the result of
years of tedious research and 3450 distinct experime
It offers three times the "breakage resistance" to sudden
temperature changes, and
It has two and one-half times the "breakage resistance"
to shock and vibration, and
It has fifty per cent more resistance to electric current
when heated than the best previous Champion Insulator
that made the name a synonym for dependability.
Besides these Insulator tests, Champions are subjected t
an air pressure test of 140 pounds to the square inch fo
compression leakage and a final inspection for imperfec
tions. "Champion" on the insulator is your guide to
better spark plugs for efficient service in your gude to
motor or engine, each guaranteed to give absolute
satisfaction to the user or full repair or replacement will
be made."
Champion "O" for Overland Cars A 14 O inch Price $1.00
Sold wherever Motor Supplies are sold
Champion Spark Plug Co. of Canada, Limited
Windsor, Ontario.
67
Champion
Dependable Spark Plugs
have Quality, Service, Efficiency and Satisfaction "Built-in"
You need have no hesitancy in buying Spark Plugs with "Champion" on the insulators. Every one is absolutely guaranteed.
3450 Insulators have a "built in" quality that withstands excessive temperature changes, cylinder shock and vibration to a far greater extent than our best previous insulators which gained for Champions a world wide reputation for dependability.
Champion dependability and efficiency have been paid an overwhelming tribute by the greatest automobile engineers in the world in their selection as regular factory equipment for Ford, Overland, Studebaker, Maxwell and over two hundred other makes of gasoline motors and engines.
Therefore—every spark plug with "Champion" on the insulator is a full value plug and assures efficient, economical and satisfactory service in its use.
There is a type of Champion to meet the exacting requirements of your motor or engine and we guarantee it to give "absolute satisfaction to the user or full repair or replacement will be made."
Champion "Maxwell" for Maxwell Cars A 44 3/4-18 Price $1.00
66
Sold wherever Motor Supplies are sold.
Champion Spark Plug Co. of Canada, Limited.
Windsor, Ont.
Every Ford Car is Champion Equipped
The fact that since 1911 Ford Cars have left the factory equipped with Champion "X" Spark Plugs is the best possible reason why every plug replaced in your Ford should be a Champion "X."
The Ford instruction book says—"The make of plugs with which Ford engines are equipped when they leave the factory are best adapted to the requirements of our motor."
No indorsement can be stronger than that of the Ford engineers for
Champion
Dependable Spark Plugs
The exclusive factory equipment of Fords, Overlands, Maxwells, Studebakers and the over whelming majority of all gasoline motors and engines in use is not a matter of guess - Champions have justified every claim and every confidence by an unbroken record for dependability under every possible test in actual service.
Specialization is responsible for Champion superi ority—all our energies are devoted only to building better spark plugs. The asbestos lined copper gaskets that cushion the insulator are an exclusive feature—the 3450 insulators themselves will withstand tests that destroy ordinary insulators.
There is a type of Champion that is especially adapted to increase the efficiency of your Motor Car, Truck, Tractor, Farm Engine, Motor Cycle or Motor Boat
Be sure that "Champion" is on the insulator, it guarantees "Absolute satisfaction to the user or full repair or replacement will be made."
Sold where Motor Supplies are sold.
Champion Spark Plug Co. of Canada, Limited.
Windsor, Ontario.
68
No Motor is Better Than its Spark Plugs
You may have the best motor in the world, but it cannot produce maximum power without efficient spark plugs.
On the same principle a spark plug is no better than its insulator which although a seemingly insignificant part of your motor or engine, must withstand the same hammering blows of gas explosions and the same rapid expansion as the steel cylinder in which it is placed That is where 3450 insulators in
Champion
Dependable Spark Plugs demonstrate their Superiority
3450 separate experiments have produced Champion insulators a material so much like ste in its ability to take the hardest kind of punis ment that it is practically indestructible.
Do you wonder that four out of five gasol motors and engines have Champion Plugs standard equipment?
There is a type of Champion Plug that will ena your motor or engine to produce its hig efficiency no matter what its make or what used for
Any spark plug with "Champion" on the insul is guaranteed to give you satisfactory service.
Sold wherever motor supplies are sold.
Champion Spark Plug Co., of Canada, Limited.
Windsor, Ontario
Champion Tractor Plugs Insure Tractor Efficiency
The tractor is one of the most severe of all service tests to which Spark Plugs are subjected
Its low speed and continuous, heavy load, whether on draw bar or belt, develops a terrific heat with tremendous shock strain and vibration
Its efficiency depends on the ability of its spark plugs to withstand such gruelling punishment.
Champion
Dependable Spark Plugs
have a "built in" dependability and have long since proved their ability to render satisfactory service under any con dition in every type of tractor or farm engine just as they have in the more than two hundred makes of motors in which they are regular factory equipment
Champion 3450 Insulators with their patented asbestos lined gaskets resist heat expansion, cylinder shock and vibration to an extent far in excess of the efficiency demands of heavy duty tractor service
Insist that every Spark Plug you buy for any purpose has "Champion" on the insulator it guarantees "Absolute satisfaction to the user or full repair or replacement will be made."
Sold wherever Motor supplies are sold
Champion Spark Plug Co. of Canada, Limited.
Windsor, Ontario
Champion 27 "Motor" for Fordson A 14 7/8 inch Price $1.00
"Heavy Stone" for Tractors and heavy Service Motors B13 7/8 in B43 7/8 10 B 23 7/8 long Price $1.25
71
Why 4 out of 5 Motors are Champion Equipped
Your best assurance that, in selecting Champion spark plugs, you are combining the greatest degree of dependability, service and economy, is contained in the fact that Fords, Overlands, Studebakers, Maxwells, and over two hundred other makes of gasoline motors and engines made in North America, leave their factories equipped with
Champion
Dependable Spark Plugs
The reasons for such widespread preference are obvious we make only spark plugs, and have concentrated our efforts on studying the peculiarities of every type of motor and in producing a spark plug that enables it to maintain its highest efficiency at lowest cost
Champion 3450 Insulators have been developed to a strength that renders them practically indestructible even in the hardest kind of service Champion asbestos lined copper gaskets, an exclusive patented feature, absorb cylinder shock and heat expansion It is because of these features that every Champion is covered by our guarantee of "Absolute satisfaction to the user or full repair or replacement will be made."
Be sure that every spark plug you buy has "Champion" on the insulator—it's the mark of satisfaction and "plus service."
Champion "Buick" for McLaughlin Cars A32 Long, 7/8 18 Price $1.10
Sold wherever Motor Supplies are sold
Champion Spark Plug Co. of Canada, Limited
Windsor, Ont.

NEVEROUT PARKING LIGHT

THE Rose Manufacturing Co., 910 Arch St., Philadelphia, have perfected a new parking light which burns kerosene, and therefore its use saves wear on the battery. It is light in weight, neat and compact and attractive in appearance. It is made of brass so that it will not rust, and is constructed in such a manner that it will not rattle or jar apart. This light shows a white light ahead, a large rear signal and also white and green side lights.

ZWEBELL RETREADER

THE new improved Zwebell Single Cavity Retreader and Tire Building Machine is now put on the market by Zwebell Bros., Milwaukee, Wis. By this method one does not apply live steam to the tire in any way nor at any point, thereby avoiding any tendency to shrink beads and dry out fabric—obviates danger of leaving carcass brittle and susceptible to stone bruises.

Semi-cure flanges at ends of molds prevent break in cure. If done by careful workmen, it is impossible after a tire has had three complete cures to find any indication of the lap of any of the three cures.

Five large and extra heavy clamps are furnished with each cavity, equipped with five 1-inch pressure screws having vise type threads which operate quickly and show practically no wear after being in service a long time.

The manifold is of massive construction with plenty of area for steam and return of condensed steam. Manifolds are furnished in the three-way type as our standard machine. A one-way manifold will be furnished where only one mold is desired to start with. If two models are wanted the three-way manifold will be furnished with the centre outlet closed. The simplicity of this arrangement for providing flexibility to suit all requirements will be appreciated.

After the new tread has been built onto the tire all that is necessary is to place the sand bag we furnish inside of it, place tire in the mold with the sand bag on top of it, set the 1/3 circle spring steel bar in place on top of the sand bag, place the five clamps in position and screw down the five pressure screws with the quick-acting ratchet wrench which we furnish. This operation repeated three times and gives you a complete retreaded tire.

Immense pressure is obtained from these five pressure screws while pressing on the 1/3 circle spring steel bar which rests on the sand bag inside the tire. The sand bag distributes this immense pressure evenly to low and high places alike. The result is a tread that flows and fills all low places regardless of whether the tread is built evenly or not. It comes out of the mold looking like a brand new black ribbed cord tire. Furthermore, on account of the immense pressure a very dense tread is obtained which is responsible for its wonderful wearing qualities.

JUPITER STANDARD PLANT

THE Jupiter independent light and power plant consists of three essential units, which are enumerated below:

1. The generator or dynamo which generates the electricity to be used in the lights and for charging the storage battery.

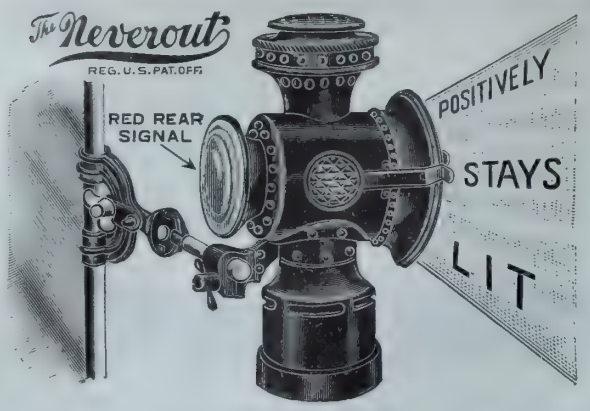
2. The switchboard, which has mounted on it the necessary switches and instruments to control the system.

3. The Storage Battery, which is the heart and life of the plant, and which stores up a reserve supply of electricity during the time the engine is running, or if necessary to help out the generator when an excessive number of lights are burning.

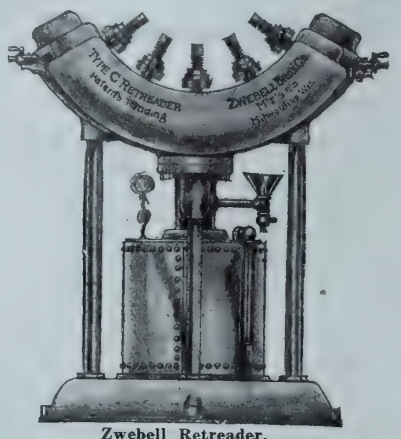
An engine or other source of power is necessary to drive the generator, but no engine is included in the plants as listed.

JUPITER PLANTS are made in 21 different sizes to meet any requirement from a small cottage to a large town.

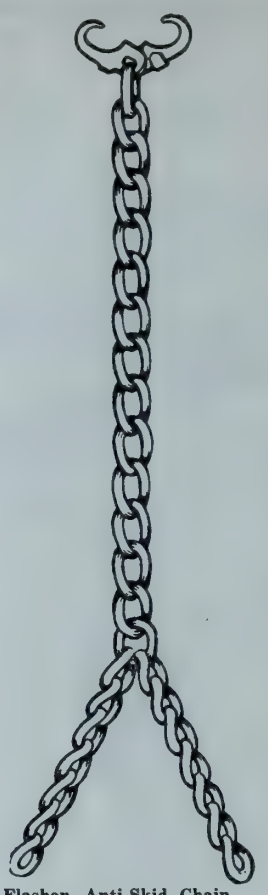
The manufacturers: Perfection Storage Battery Co., Chicago, Ill.



"Neverout" Parking Light

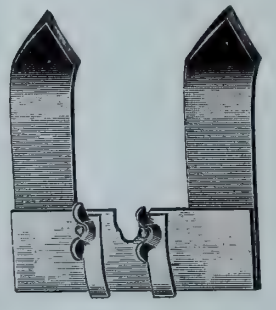


Zwebell Retreader.

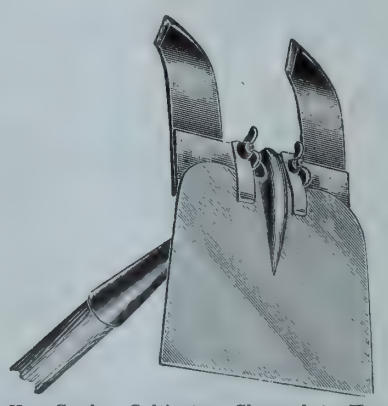


Flashon Anti-Skid Chain

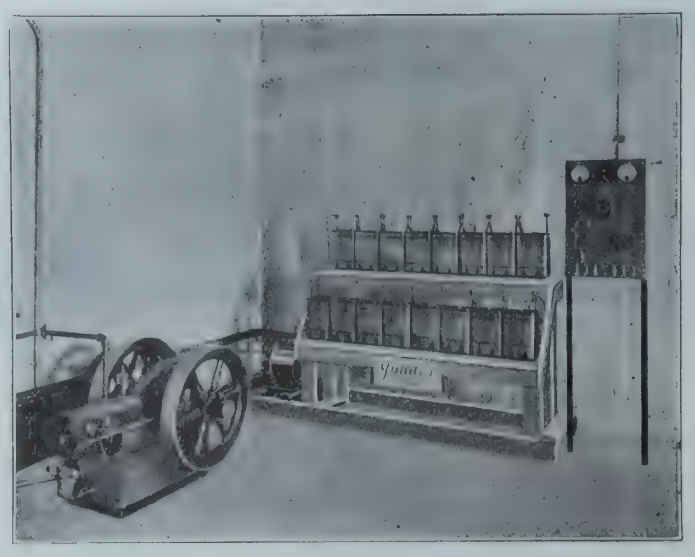
Heiser's Cylinder Reboring Machine.



Hoe Garden Cultivator, Unattached.



Hoe Garden Cultivator, Clamped to Hoe.



Jupiter Standard Plant.

FLASHON CHAINS

FLASHON anti-skid chains, manufactured by the National Chain Co., New York, are designed primarily for motor truck use. They are simply short lengths of chain with hooks at each end, so designed that they are locked together by a simple turning of a specially devised locking link. The price of the chains range from $1.70 to $3.25 for single tires and from $2.55 to $3.65 for dual tires.

GARDEN CULTIVATOR

A GARDEN cultivator should form a part of the equipment of every gardener. A novel and useful garden tool is a two-shovel cultivator that clamps rigidly onto the upper (or unused) portion of the garden hoe, thus giving two tools on one handle.

It is made from fourteen gauge polished steel, strong and durable, especially useful in heavy soil. To produce healthy, fast-growing plants, deep and frequent cultivation is necessary.

It provides the means for thorough and rapid work. When the plants are small, draw the cultivator, or shovel, on each side of the plants as you walk, and you have loosened the soil at exactly the proper distance from the plants. no injury having been done to the small roots; a round trip between the rows, and the work is well done in short order. If you should find a weed, you also have the hoe right in your hands for its immediate destruction.

The cultivator attachment saves the back many aches during the planting season. By tilting the cultivator and using only one shovel, a furrow may be marked out, and after the seeds have been placed, the two shovels may be used to cover the seed.

This tool appeals to the gardener because it provides a splendid garden cultivator at a small expense. It is manufactured by the Hoe Cultivator Co., 138 Kenilworth Ave., Oak Park, Illinois.

REBORING MACHINE

HEISER'S Improved Cylinder Reboring Machine has a range of adjustments sufficiently large to cut away the entire cylinder wall. This means that the tool will bore out cylinder to accommodate any oversize piston that may be desired.

The boring bar is guided with absolute accuracy by two pilots, and it rebores between centres without the slighest taper.

The machine is also self-sharpening. The cutting bits are sharpened and given the correct amount of clearance without an emery wheel, cost, worry or experience, in any shop by anyone.

Hyslop Bros., Toronto, are Canadian distributors.

BRADY SYSTEMS

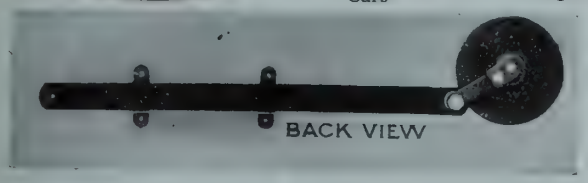
THE Brady self-measuring underground tank for gasoline provides a system which absolutely protects both the garage man who sells and the auto owner who buys "juice." When the garage receives a supply a check is provided so that any variation, even a fraction of a gallon in a 500-gallon delivery is detected. The 250 to 1,000 gallon tank is buried safely below the ground, and indicators above register quantity in the tank, and amounts as sold to each customer.

A "combination" pump is just being placed on the market by the manufacturers, the "Brady Systems" Sales Co., Inc., Louisville, Ky. In this, which was perfected only a few days ago, there are two distinct and separate pumping units each independent of the other, and each unit equipped with a rotary pump, one to be operated by electricity, and the other to be operated by a hand crank, or both can be operated at the same time where it is found necessary to dispense gasoline very rapidly. It is not only the purpose of this hand crank that it can be used when the current is off, but it also can be used in the quieter hours of the day when there is not a rush of business.

Hindview
AUTO MIRRORS

Style A—For Smaller Cars

MADE IN DETROIT USA



Style D—For Trucks

Style A—Long For Larger Cars

Style F—For Front Fenders of Cars or Trucks

The "Hindview" Auto Mirror prevents accidents by enabling the driver to keep an eye on the rear traffic without losing sight of the road ahead. Our Ball Joint allows immediate adjustment to any desired angle without the use of any tool.

Substantially made—nicely finished—has five inch plain, or lens, plate glass mirror. The lens mirror increases the field of vision about 50 per cent. without distorting the view. Note large firm clamp for attaching to windshield.

Write for our folder showing complete line.

We are manufacturers of SHEET METAL STAMPINGS to order, such as Washers, Shims, Card Holders, Light and Medium Weight Drawn Work.

KALES STAMPINGS

WRITE FOR OUR CATALOG

KALES STAMPING COMPANY

446 West Lafayette Blvd. Detroit, Michigan

"NIAGARA" ACCESSORIES

"Niagara" Jacks

Six good models

"Niagara" Pumps

Efficient and durable
Chrome leathers used throughout

"Niagara" Bumpers

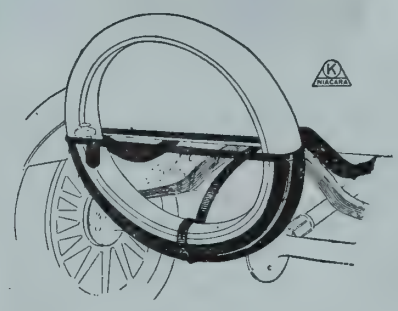
Every Niagara Bumper is built with shock-absorbing springs

"Niagara" Tire Carriers

The Best Yet!

"Lyon" Resilient Bumpers

Save the car without spoiling the bar



For Satisfaction

Specify "Niagara" Brand to your jobber; or write direct to the manufacturers.

Kinzinger, Bruce & Co., Limited

Niagara Falls Canada

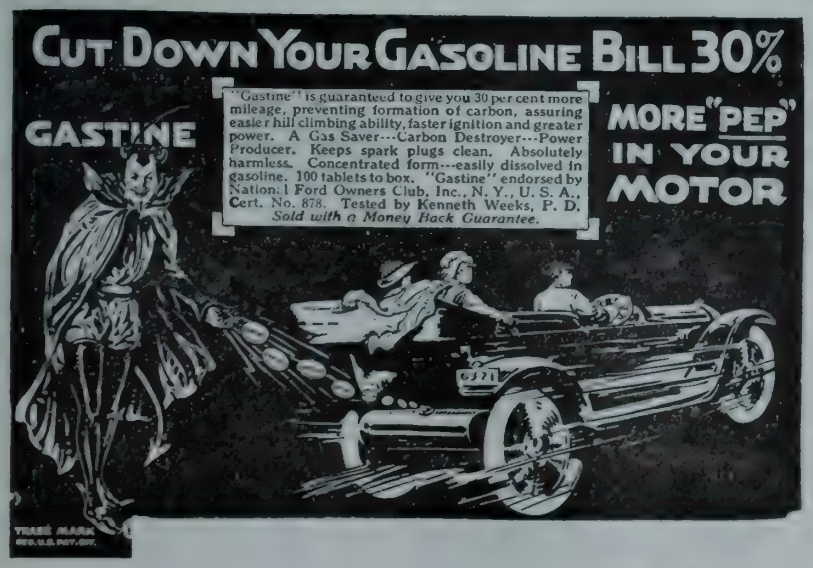
GASTINE GASTINE GASTINE

Is a Gasoline Economizer

It Has Stood the Test for Five Years, Under All Climatic Conditions, In All Makes of Cars, Foreign and American

Used By the Allied Governments in Their Motor Trucks, Gun Tractors, Aeroplanes and Tanks

Has Just Been Placed Upon the Canadian Markets


CUT DOWN YOUR GASOLINE BILL 30%
"Gastine" is guaranteed to give you 30 per cent more mileage, preventing formation of carbon, assuring easier hill climbing ability, faster ignition and greater power. A Gas Saver---Carbon Destroyer---Power Producer. Keeps spark plugs clean. Absolutely harmless. Concentrated form---easily dissolved in gasoline. 100 tablets to box. "Gastine" endorsed by National Ford Owners Club, Inc., N. Y., U. S. A., Cert. No. 878. Tested by Kenneth Weeks, P. D.
Sold with a Money Back Guarantee.
GASTINE
MORE "PEP" IN YOUR MOTOR
TRADE MARK

A Quick and Easy Seller

HILL-CLIMBING ON HIGH—GASTINE DOES IT

Gastine is in tablet form—easy to use—one tablet to the gallon in your gasoline tank—gives 30% more power and climbing ability—faster ignition—a smoother running engine—more mileage and no carbon.

Gastine is guaranteed harmless. Tested by Milton Hersey & Company, Limited. Endorsed and its use recommended by the National Ford Owners' Club, Inc., certificate 878.

Gastine is the only product of its kind which has successfully lived up to every claim made for it by the manufacturers.

Retails at $1.25 per box containing 100 tablets. Liberal discounts to dealers. AGENTS WANTED. Write for further particulars.

EVANS & CO. LIMITED, Coristine Bldg.

MONTREAL - - CANADA

Implement Dealers' Problems

Last month we published a brief synopsis of the problems discussed by the Saskatchewan implement dealers when they met the wholesalers in Regina, May 12. Owing to the Western strikes and mail delays, fuller details did not arrive in time for the June issue. The meeting was exceedingly amicable and the questions arising were discussed in the best of spirits. The following resolutions were passed unanimously by the Implement Dealers' Section:

1. Resolved, that the average cost to sell small implements is at least 18 per cent. of the sale price, this figure being based on the experience of those dealers who have kept careful records in this connection.

2. Resolved, that in the opinion of this meeting eight per cent. over cost to do business would constitute a fair profit on cash dealings under a wholesale contract.

3. Resolved, that we, as implement dealers, deplore the tendency towards the doing away with the wholesale contract, and it is our opinion that there should be a spread of at least five per cent. between the invoice price of goods shipped on the wholesale contract and a consignment contract and with the same cash discount.

4. Resolved, that in the opinion of this meeting the company alone should not be the sole judge as to whether or not the customer was sound financially at the time of sale; and, further, that the period in which they may charge back such notes be limited to not more than thirty days from the date such notes are received by the company; and, further, in the event of any note being rejected and so charged back, the agent shall have the privilege of settling for same at the wholesale price of article involved.

5. Resolved, that on a consignment contract, the dealer should have privilege of discounting his note before October 1st at five per cent. below invoice, losing his cash discount.

6. Resolved, that this meeting is of the opinion that anyone handling implements should be in a position to give a reasonable repair service, and in order to do this he must be assured of a reasonable profit on same; that this profit can only be realized on a discount of not less than 35 per cent. of list price; and further, that under a consignment contract repairs should be on a consignment basis, and that on a wholesale contract greater consideration should be shown to the dealer who wishes to exchange or return repairs on hand.

TRACTOR TEST RULES

Through its tractor testing and rating committee the American Society of Agricultural Engineers has issued a set of rules and instructions for conducting local tractor demonstrations. They are known as "Class A" rules and are designed to meet the needs particularly of agricultural agents, agricultural institutions, dealers, distributors, and manufacturers, for conducting tractor demonstrations of a local nature only.

The object of the "Class A" rules, as stated by the committee, is to make all tractor demonstrations of this kind comparable and of the greatest educational value. There is a great demand by persons conducting local demonstrations for standard rules and instructions to follow. In the past there has been such a lack of uniformity in conducting demonstrations and securing data that the results of these events have proved of little value either from a practical or educational standpoint.

Dealers, distributors, agricultural agents, or any individual or organization interested in conducting local tractor demonstrations may obtain a copy of these rules by writing to the editor of this journal.

WINS $100 PRIZE

Beatty Bros., Limited, head office, Fergus, Ont., and branches in St. John, Montreal, Winnipeg, Edmonton and London, England, have just concluded a most successful sales contest. The contest embraced thirty-seven salesmen —from Coast to Coast, and the products sold included all the stable equipment.

H. P. RENAUD

Prizes were awarded on a quota basis, based on past records for the various territories. The winner of the first prize of $100.00 was H. P. Renaud, working out of the Montreal branch. Mr. Renaud made the magnificent percentage of 556% on his quota.

Books For The Trade

BARNEY OLDFIELD'S BOOK

Barney Oldfield has just written a book for motorists, which should have an appeal for every car owner or driver. It is written in a non-technical way and its chapters take up everything from buying the new bus to caring for the spark plugs. The book is liberally illustrated. No better idea of its contents and message can perhaps be given than by quoting Barney's foreword. The publishers are Small, Maynard and Co., Boston, Mass. The cost is $1.50 (net) or $1.65 by mail.

"Bong Joor!" says Barney Oldfield. "I've been engaged to give my personal attention to your car. It has just been discovered that I've been absorbing a whole lot of valuable information about the care and upkeep of every car built in the past twenty years. During that time the public thought my sole interest was the establishment of a reputation for holding most of the world's worth-while speed records. I plead guilty. But it was my intimate knowledge of cars, the designing and construction and general ability to force the last ounce of power out of them, that enabled me to pull down so many 'firsts.' Just to help out a whole lot of good fellows who have been too busy with other things to devote twenty years of their life to acquiring this practical knowledge I've written a book for you. Do not merely glance my book through, or read it carelessly, but study it with a view to understanding it. Keep at this study until you have thoroughly absorbed the general advice and suggestions, even if you fail to grasp the more technical information it contains. No matter what class or price your car represents, I'll try to help you reduce the upkeep and increase its service."

MANUAL FOR AUTO DEALER

"Automobile Selling," a manual for dealers, has just ben published by Motor Publishing Co., 119 West 40th St., New York. It is written by Dr. Paul H. Nystrom, who for two years has conducted intensive investigations as to the best ways of selling employed by automobile dealers, garages, accessory and tire stores. Several hundred places were visited and studied. Some of the topics which show the scope of this work are:

Opportunity in the automobile business; a place a business that will help; buying a business versus starting a new one; fitting your place of business to help make sales; who your prospects are and how to find them; management of employees; desirable qualities salesmen should have; what the automobile salesman should know about his car; demonstrating the car; objections and how to meet them; advertising to secure business; making money from accessories; leaks and wastes; an accounting system that accounts.

All the suggestions made are helpful, and a number of things are told which the dealer should not only know, but should pass along to his customers.

Catalogues and Pamphlets

TRACTOR HITCH BOOK

A new tractor hitch book has been compiled by President J. B. Bartholomew, of the Avery Company, Peoria, Ill. It is dedicated to farmers who are adopting motor power for crop production, to road officials who are substituting tractor power for animal power in road building, to dealers who are marketing tractors and tractor operated machinery and to publishers who are promoting the adoption of motor power for farming and road building.

The purpose of this book is to assist tractor owners in getting the greatest possible use from their tractor. He has endeavored to illustrate in it and describe the method of attaching a tractor to various kinds of tools for doing nearly every kind of traction and belt work for which a tractor is ordinarily used.

GRAY TRACTOR PAMPHLET

The Gray Tractor Company of Canada, Winnipeg, has issued a new publication, entitled "What the Gray Tractor is Doing." Another piece of Gray publicity is a pamphlet, entitled "Facts from the Field," which embodies a series of letters from owners of Gray tractors, located all over Western Canada.

A special feature of this machine is the side arm hitch, which allows the farmer to perform four distinct operations at one time. He can plow, while on one arm a harrow is hitched, harrowing the newly turned soil. On the land side of the tractor the stubble is disced at the same time by a disc harrow attached to the left-hand side arm of the Gray tractor. The wide drive drum of the tractor rolls the soil before the plows. This drum does not pack the soil as the weight of the tractor is spread over a large traction surface.

Gray tractors have no differential and no bevel gears. The transmission consists of six large spur gears, running in oil. Power is transmitted to the drive drum by means of heavy duty roller chains—one on each side of the drum. Manager Prugh, of the Gray Tractor Company of Canada, Winnipeg, will be glad to send interested dealers full particulars of the Gray.

NOW THE CLETRAC TRACTOR

The Cleveland Tractor Company of Cleveland, Ohio, has adopted the name Cletrac as the registered name of its tractor.

The phrase Tank-Type-Tractor is to be used in connection with the name, since the Cletrac is of crawler construction, and has the battle tank's facility for doing its work under the most difficult conditions.

The company manufacturing this 12-20 horse-power crawler-type tractor has progressed by leaps and bounds since its foundation only two years ago.

Maybe Adam Laughed at These

The Horseless Vehicle.—"It's funny how afraid your horses still are of automobiles up here," said a summer visitor to a Maine farmer.

"I don't know that it is so funny," answered the farmer. "Not so strange, when you think how an automobile must look to a horse. Wouldn't it seem strange to you if you saw my pants comin' down the road with nothin' in 'em?"

* * *

Taking Advantage of a Hill.—An officer on board a warship was drilling his men.

"I want every man to lie on his back, put his legs in the air, and move them as if he were riding a bicycle," he explained. "Now commence."

After a short effort, one of the men stopped.

"Why have you stopped, Murphy?" asked the officer.

"If ye plaze, sir," was the answer, "Oi'm coasting."—*Pittsburgh Chronicle-Telegraph.*

* * *

Not the Right Noise.—"I want to return this automobile honker."

"Isn't it all right?"

"It might be for some people, but not for me."

"Why not?"

"Man alive, I'm a doctor, and this blooming thing makes a noise like 'Quack! Quack!' "

* * *

No Such Motor Car.—The teacher was trying to give her pupils an illustration of the word "perseverance."

"What is it," she asked, "that carries a man along rough roads and smooth roads, up hill and down, through the jungles of doubt and through the swamps of despair?"

There was silence, and then Johnny, whose father was a motor car dealer, spoke up.

"Please ma'am," he said, "there aint no such car."—*People's Home Journal.*

* * *

Avoid Substitutes.—They were enjoying a motor ride and had just entered a country road.

"May I kiss your hand?" he asked, a little confusedly.

She removed her veil.

"No," she replied; "I have my gloves on."

* * *

HART-PARR "30"

The Hart-Parr Co., Charles City, Iowa, has issued a new publication featuring their Hart-Parr 30. There is grist of interesting and useful information in this booklet, and also a wealth of illustrations. In discussing the "30" there are a lot of good "dealer" arguments demonstrating its use as compared with horses.

PISTON RING DIRECTORY

A complete and up-to-date piston ring size directory has just been published by the Gill Manufacturing Co., 351 West 59th St. Chicago, Ill., whose Canadian factory is the Brown Engineering Corporation, 415 King St. West, Toronto. All information that dealers could want on this subject is given in detail. It is sent to dealers free of charge—everyone else has to pay 25 cents.

NEW BEEMAN CATALOG

The Beeman Garden Tractor Company, Minneapolis, Minn., have issued a new catalog and testimonial folder fully describing their light one-horse garden tractor.

This catalog features the tractor's versatility in performing farm work on a small scale, to any field work of one-horse and any power work of a 4 h.p. engine.

There have been no specific changes in the motor. It is a one-plow outfit.

NEWS — OF THE TRADE FOR THE TRADE

ONTARIO

DURHAM.—C. Smith and Sons have taken the Briscoe agency.

PISTON.—Sherman Young has opened an auto accessory shop in the old Ruben shoe store.

WOODSTOCK.—The Waddle Cut Rate Tire Store is the name of a new concern just started.

STRATHROY.—Crook and Baynton, Reliance Garage, has relinquished the agency for Gray-Dort cars.

TRENTON.—A new motor car agency and repair shop has been opened by W. H. Sweet and Guy Weese.

EVANSVILLE.—Starks and Meville have purchased the old German stone building and are opening an up-to-date garage.

NORWOOD.—Elliott's Garage is announced as open for business, and he has a splendid location in Peterboro street.

GALT.—Henry Chew of the Central Cafe, a well-known local Celestial has purchased an aeroplane through a Toronto auto agency.

MORRISTOWN.—George Madin, of Galilee, has purchased a lot here and is building a modern garage, 50 x 75 feet, constructed of concrete.

RAINY RIVER.—A. C. Gjelhaug, has leased the Chapman garage repair shop, and announces an extension and modernization of the business.

HAMILTON.—The Beaver Motor Truck Company, capitalized at $250,000, has decided to locate here. A light two-ton truck will be turned out.

TORONTO.—The Russell Motor Car Company has sold its Buffalo plant, which was an important subsidiary during its operations on war contracts.

GODERICH.—A. M. Glover, proprietor of the East Street Garage, who has been nine years in business here, has completed a large addition to his premises.

GODERICH.—The Convertible Cormanufactures the Megow Convertible Tractor, and Tractor ttachment, has announced that it will locate the Canadian factory here.

PETERBORO.—The vote on the Stickney Motors, Limited, was a very light one, and was carried by a majority of 560 votes. Only 18 votes were polled against the by-law.

HAMLTON.—The International Harvester Company is buisily engaged on the manufacture of agricultural implements for the American market, a recent shipment to Kansas consisting of 3,000 binders.

OSHAWA.—The General Motors of Canada, Limited, has completed plans for an assembling plant to be erected in Oshawa by the Oldsmobile Company. Another building will be announced in the near future.

ST. THOMAS.—J. D. Cumming, who has been manager of the Elgin manufacturing Company, has organized the Detroit Spring Company and secured a factory in Detroit in which to manufacture automobile springs.

TORONTO.—Toronto has a new epidemic—garage building. Permits are being issued at the rate of ten a day. In 1905, one permit was issued; in 1918, 1,238 were issued; for the first half of the present year more than 1,000 were issued.

OTTAWA.—Speaking in the Budget debate, Archie B. McCoig (Kent) complained that farm tractors had been brought into Canada at a low valuation and sold to producers of Canada at a high price.

Sir Thomas White asked Mr. McCoig if he was by any chance the agent of a farm implement company.

Mr. McCoig—I represent the International Harvester Company in Chatham, but in this House I represent the Canadian people.

Sir Thomas White—Well, it is sometimes hard to serve two interests.

Mr. McCoig—Well, you should know.

MARITIMES

TRURO.—An improved gasoline supply tank, with a capacity of 1,000 gallons of gas, has been installed by Bligh and Prince.

SYDNEY.—Charles and George Edwards have returned from Detroit, where they attended the Michigan State Auto Schools during the Spring. They have high-class diplomas and contemplate going into the auto repair business here.

ST. JOHN.—Messrs. Pugsley and Company have installed a complete and up-to-date service and repair equipment in a splendid plant at Glen Falls, formerly occupied by the Ford Motor Company of Canada, and are doing repair, rebuilding, painting, electrical work, etc., on all makes of cars. The new business was opened June 16.

SYDNEY.—Three new garages and three new service stations are being erected in this city during the summer. The first to be erected will be by A. F. McDonnell and J. V. Peters, who have formed a partnership for the sale and service of McLaughlin cars. The other garages are being opened by J. and F. Azar and Jack McKenna. The latter expects to build during the late summer or fall.

U.S.A.

NEW YORK.—The B. F. Goodrich Rubber Company now guarantees 6,000 miles on its fabric tires instead of 3,500 and 8,000 miles on its cord tires instead of 5,000 miles.

CLEVELAND.—The capitalization of the Cleveland Tractor Company has been increased $1,900,080, in order to meet the rapidly-growing requirements of the farm industrial and foreign markets. The Cleveland stock has been put on a 6 per cent. dividend basis.

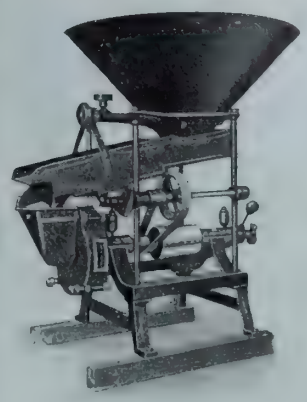
CHARLES CITY, Iowa.—One day's shipment of Hart-Parr products from this city recently included a trainload of light cars of crated tractors for the French distributors at Angers; five cars of uncrated tractors for U.S. distributors; and two cars of windlasses for the Emergency Fleet Corporation—the tail-end of war contracts.

CHICAGO.—With the death of W. W. Dinger at his home here May 25, one of the real veterans of the implement industry passed away. He was born in 1831, and for more than sixty years was engaged in the implement field. He joined the J. I. Case Co., when it bought the Sawyer plant in 1878, and remained a Case man until 1906 when he retired from active business life.

"Give Me Three"

About two weeks ago, some visiting factory salesmen from across the line initiated a Winnipeg auto sales manager into the mysteries of the great American indoor sport "Give me three." The sales manager had the usual beginner's luck and he began to think he was as good a poker player as he is a car salesman. He bumped into another American salesman last Sunday and worked the grand old game of bluff with very satisfying results. Then a third salesman blew in and the Winnipegger once more tried to bluff with a pair against a full house. He's sadder and wiser now.—Winnipeg *Telegram.*

He'll always be satisfied



and you'll be well repaid in commission

If you sell him a "VESSOT" FEED GRINDER

We have manufactured grinders and their accessories for over 35 years—and the quality and service show it.

Vessot Grinders have obtained medals and highest awards wherever exhibited, Chicago, Paris, etc.

TRADE MARK S.V. REG

Look for this trade mark on Genuine Vessot Plates. Beware of imitations of Vessot Grinder Plates.

Write for full particulars and Agency Proposition.

Inventors and Manufacturers

S. Vessot & Co.
JOLIETTE, QUE.

Sold Exclusively in Canada By

International Harvester Co. of Canada, Limited

Branches: Calgary, Edmonton, Lethbridge, North Battleford, Regina, Saskatoon, Yorkton, Brandon, Winnipeg, London, Hamilton, Ottawa, Montreal, Quebec, St. John.

Elevator and Bagger

Shaw's Auto Salvage Parts Supply Co.

923-927 Dufferin Street, Toronto
PHONE JUNCTION 3384

An efficient service intelligently rendered on all used parts.

GEARS, MAGNETOS, RADIATORS, SHAFTS, SPRINGS, CARBURETORS, BEARINGS, LAMPS, WHEELS

"ALL SERVICEABLE" NO JUNK

Correspondence Solicited. Inspection Invited
Prompt Deliveries. Money Back Guarantee. No advance in Our Prices.
Largest Stock in the Dominion. No sending of Wrong Parts is convincing enough for you to *Wire, Write or Phone*

Shaw's Auto Salvage Parts Supply Co.
923-927 Dufferin Street, Toronto
PHONE JUNCTION 3384 K-13

Grain Lifting Guards

The Merkel Grain, Lifting Guards fill a long felt want on every Canadian Farm where the grain grows heavy, becomes wind-blown and lays low near the ground. It is impossible to estimate the great loss incurred in past years through fallen grain on the farms of this country.

The Merkel Implement Co. developed this Grain Guard—a practical solution to the farmer's difficulty in harvesting fallen grain. The Bateman-Wilkinson Co., Ltd., of Toronto, Ont., are now manufacturing this Guard for the Canadian trade.

Every binder in Canada should be fitted with these Guards, the manufacturers claim. What farmer has not often, in an effort to pick up fallen grain, set the cutter bar of his binder down into the ground? What farmer has not had the experience of having to cut grain all one way on account of the tangled and matty or fallen grain? The Merkel Grain Lifter Guards will save grain, save time, otherwise lost, and save the binder.

These Grain Lifter Guards are adjustable to fit all binders, except machines having riveted guards. They pick up the fallen grain that without them would be left on the ground, and lost. They raise the matted straw above the cutter bar, allowing the knife to run freely and easily, eliminating the wear and strain on the binder and making lighter draft. The Guards need not be taken off, as they are never in the way. They will last a life-time, and the saving on two acres of down grain will pay for a set of them, the makers claim.

These Guards will be sold at a popular price and the Canadian manufacturers will be glad to get in touch with implement dealers who want to get in on "a good thing."

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

IS

A CANADIAN COMPANY offering service of interest to and in the interest of Canadians.

Time payments made possible and profitable for Manufacturer, Dealer and Customer. Of particular interest to Automobile and Musical Instrument Trades.

LET US KNOW YOUR REQUIREMENTS

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

Bank of Hamilton Building, Toronto, Ontario

McArthur Building, Winnipeg, Man.

WE GIVE

"Quality and Service"

IN

TRACTOR and TRUCK STEEL CASTINGS

JOLIETTE STEEL CO., LIMITED

903 Read Building, Montreal

JOLIETTE, P.Q.

Implements that give Everlasting Satisfaction

Farmers everywhere agree that Peter Hamilton farm implements are leaders in the farm field. Live dealers should take advantage of this fact by procuring an agency that will mean bigger business for them.

Peter Hamilton Farm Implements

are of durable construction and built to meet the demand of the heaviest work.

The Peter Hamilton Cultivator is a light draft implement in spite of its superior strength. All teeth cultivate to the same depth and thoroughly work up every inch of the ground. Has many special selling features, including the new relief spring.

We manufacture spring tooth and stiff tooth cultivators, scufflers, harrows, mowing machines, rakes plowers and cutters.

Dealers, write to-day and get the agency for this paying line.

The Peter Hamilton Co. Limited

PETERBORO - ONTARIO

Dairy *and* Household Supplies

SOME SELLING IDEAS

FARM homes where high ideals and community work are advanced,are the best agencies for spreading the gospel of better home conveniences. A low standard of living even where the farmers are wealthy does not do the world much good.

The dairy farmer is the man who is making good money regularly. No matter how close a customer he may have been in the past, he readily responds to the appeal for better conveniences and up-to-date appliances.

For years the dairy cow has been the very backbone of permanent agriculture. She has returned to her owner a steady cash income. She has turned roughage and coarse forage into essential human foods. Not only do these things make the cow a profitable investment, but she also returns to the soil vast stores of essential plant foods. Never has the public at large appreciated the cow more than at present.

WATCH THE OIL

Because of the tremendous speed at which the cream separator bowl revolves the lubricating oil must be of the very highest quality and properly compounded for separator use. If the oil is too thick or too thin, it dries out or gums up; if it contains grit, acid or moisture it is injurious to the separator and makes it hard to run.

UNDERSTAND WOMEN

Of particular interest to farm and rural women are those things that contribute to the family welfare and health and to economies in money, time and labor that make it possible to work more intelligently and with less fatigue and worry. An agent who understands the women of his territory will be more successful in his sale talks to the farmers.

SAVE $1,000 PER TON

The farmer who permits his calves to nurse the cows and who wastes butterfat in the milk which he feeds his pigs is not obtaining as much money for his butterfat as he could obtain, and naturally does not become enthused in growing better cattle. Butterfat at 50 cents per pound is $1,000 per ton, and every pound of butterfat is needed as human food. Who would think of going to the grocery and paying that price for butter to feed his calves or pigs? Still many farmers owning one to five cows feed butterfat to their stock and never give the price of that sort of feed any consideration. The cream separator is the machine to do this economy.

GOOD MACHINERY PAYS

In view of the present high value of farm products, it is important for the farmer not only to save all his product, but also to economize his time. This can be done very advantageously through a careful investment in labor-saving machinery. Any equipment that will save his product and his time, and also make more profit and provide more comfort, will more than equal any dividend that could be procured through an investment in the average stocks and bonds.

For example, there is no piece of machinery on the farm that is more useful or that is used more often than a cream separator. It does its work of saving butterfat twice daily, every day in the year, and should be one of the very first investments the farmer makes.

GOOD WATER SYSTEM

A good water system for a farm home is about as attractive a proposition to most farmers as anything. Suggestions as to local conditions and advice and friendly interest will pave the way for many sales not on the surface at the moment.

Many farmers are waiting for the Hydro-Electric service to pass their doors before deciding on a lighting service for the farms. Such men are losing valuable time. Some firms are selling unit lighting plants to be run by the gasoline engine already in operation on the farm. They will find it probably as cheap to instal such a plant now and get the use of it for years before the pole line comes along, and even then the plant can always be sold at very little write-off.

Some dealers are making several sales of sanitary closets for country homes. They are easy to set up and cost very little. A little advertisement in your local weekly or a window display will turn the sale for you.

SEPTIC TANKS

It is well to be on hand with all information about septic tanks so as to be able to advise your customers when they need the desired information. When farm folks learn to put confidence in your judgment, you have solved a great deal of the selling resistance to any line.

Mr. Dealer!

IF

Price
Quality of Material
Workmanship
Close Skimming
and
Easy Turning

are considered by your customers in buying a Cream Separator, then we claim that the

Sanitary King

is the best buy in Canada to-day. Write for prices and terms.

--

King Separator Works of Canada
Limited
Bridgeburg or Whitby, Ont.

On market 5 years. Over 5,000,000 in use. Every set guaranteed. Popular thru service. Don't rebore cylinders. "NO-LEAK-O" makes good when others fail. Made different. Give results no other ring can. Write for booklet. Order from nearest Jobber, or write direct.

NO-LEAK-O PISTON RING CO., Baltimore, Md.

READ FARM PAPERS

It is always well to read the farm papers so as to keep posted on real interesting matters about your farm clients.

WRITE FOR INFORMATION

If you lack any information on water and lighting systems or on house remodelling, the editor of the M. T. I. will be glad to give it.

GET A GOOD PLUMBER

Always recommend a good reliable plumber to any farmer who is installing water works, and a sewage system on his farm. By getting him to connect up the pipes when all things are ready, the charges will be comparatively light and the job will be well done. It is poor policy to put up a cheap job where family health is concerned.

ELECTRICAL CONVENIENCES

Electric irons, toasters, heaters, vacuum cleaners, and fans are conveniences that many farmers are installing in their houses where an electric service is put in. Many more would put these in were the suggestions put up to them in a timely way. Then again, if a leader in a community gets some of these things in, you will find the others will listen to the suggestions more readily.

OIL AND GAS STOVES

Coal oil and gasoline stoves for summer cooking in these days of fuel shortage and labor scarcity, will be a real help to the busy housewife on the farm. Ordinary care will prevent any trouble. They help out the woman's end on the farm and that is a point to talk about.

It is just possible that poultry supplies can be handled at a profit. Most people like to talk about poultry and now that the show time is coming on, the pros and cons about Leghorns, Wyandottes, Orpingtons and other breeds will be discussed in every shop. Shipping crates, feed boxes, legbands and feeds will form attractive displays.

Western News

ASHCROFT.—F. L. Peters has opened a new garage under the name of the Ash Motor Company.

LADNER.—Lanning, Fawcett and Wilson have opened a garage and tractor business, handling Gray-Dort cars and Wallis tractors.

REGINA—John G. Crick, formerly I.H.C. salesman in this territory, has been promoted to blockman.

DUNDERN.—Joseph Suchy and Frank Hill, formerly of Saskatoon, have opened the Central garage.

MACLEOD.—The Macleod Co-operative Garage Association has opened its repair and accessory department.

EDMONTO—The local branch of the I.H.C. organization has begun a Thrift Stamp campaign, which is going strong.

EDMONTON—A. W. Pierson, I.H.C. blockman, who resigned some weeks ago, has been succeeded by R. G. Barton.

PINCHER CREEK.—William Foote has enlarged and modernized his premises, so that his garage is now one of the finest in the district.

VICTORIA.—Thos. Plimley recently completed a demonstration of the Avery Motor Tractor and Beeman Garden Tractor in Duncan district.

PROVOST.—George McNeill's implement shed has been altered and opened during June as a modern garage, under the management of H. Cuthbert.

SASKATOON.—Syl. Biehn, manager of the Auto Service Company, has secured the local distribution for the Hupmobile. He also handles the Paige and Briscoe.

NANAIMO.—Thomas Weeks, owner of the Auto Transfer Company, has recently completed several improvements in his garage. He has installed, amongst other tools, a new gap lathe and drill press.

LANGHAM.—W. G. Marrable, who for the past four years has been operating a garage and machine shop at Allan, Sask., has taken over the old hotel building here and will open a garage and machine shop.

CHILLIWACK.—The Shaver Co-operative Motor Company, Limited, has been incorporated with a capital of $60,000. They are handling Studebaker cars, National trucks, and a general line of automotive equipment.

REGINA.—Wheat tractors manufactured by the Hession Tiller & Tractor Corporation, of Buffalo, N.Y., are being distributed in this province by the Wheat Tractor and Implement Sales Agency, with headquarters at Saskatoon and Service Stations at Regina and other points.

ARCOLA.—T. B. Baragar, distributor for the entire South Moose Mountain District for McLaughlin and Chevrolet cars, is doing a big business, and basing his main sales arguments on the claim that the advance in cost of automobiles sold in Arcola district varies from 32% to 60%; he claims that the Chevrolet and McLaughlin cars are sold at a lower advance than any others.

WINNIPEG.—Grace Motors announces the opening of a number of branches throughout Canada during the ensuing year. The first branch to be opened will be in Montreal, tributary to Grace Motors, Toronto; it is expected that shortly afterwards there will be branches opened at Calgary, Vancouver, and possibly Regina or Saskatoon.

SASKATOON.—Three well-known automobile men in this district have taken their first trip in the air, and seemed to enjoy it. The auto men were H. Javens, the Chevrolet and Studebaker agent at Rosetown, Sask.; Dick Ellis, also of Rosetown; and Herb. Morrow, formerly Saxon salesman here, who is now travelling for the Goodyear Tire and Rubber Co.

CALGARY.—Calgary considers June an epoch in the history of automotive affairs. Within the past month three of the finest garages in Western Canada opened for business. Webber's, Leeson and Peacock's, and the Diamond Motor Company. First street west and Fifth Ave. has become the garrage centre of the city, more than a half dozen big plants being located within a radius of three blocks.

SASKATOON—New dealers recently appointed for the Turner Simplicity Tractor, Port Washington, Wis., include: Turner Simplicity Farm Tractor Co., Saskatoon; Fred Dusdue, Lowe Farm, Manitoba; Gilbert Plains Garage, Gilbert Plains, Man.; James Witherow, Russell, Man.; Brooksley & McIntyre, Swan River, Man.

EIGHTY UNFILLED ORDERS

W. B. Appleton, agent for the Ford Company, at Yorkton, Sask., disposed of twenty Fordson tractors during the spring, most of them being sold on time to foreigners, in addition to 75 Ford cars, largely purchased by the same class of people. He has another 80 cars on order that he is unable to secure. As an instance of what is being done with the Fordson tractor, he states that one farmer, Connau Montie, has plowed and harrowed 400 acres this spring with a Fordson. This land was seeded with horses.

MADE IN CANADA

BUFFALO OILS

Quality Oils for Every Farm Purpose

You cannot get the best results in your machinery operations unless you use **quality** oils and greases. The quality of BUFFALO OILS has been thoroughly proven —they are Western Canada's favorite brand.

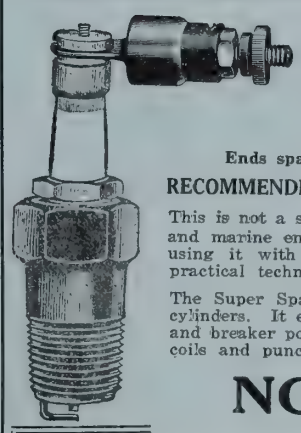
There's a Buffalo Oil or Grease to meet every requirement of the farm. Put them to the test.

BUFFALO OILS INCLUDE

Automobile Oil	Gasoline Burning Oils
Tractor Oil	Transmission Greases
Gas Engine Oil	Cup Grease
Steam Cylinder Oil	Crank Pin Grease
Machine Oil	Graphite Grease

PRAIRIE CITY OIL CO., LIMITED

Winnipeg Manitoba



IN POSITION

QUICK, STRONG, LIVELY SPARK

The Super Spark

Ends spark plug trouble and prolongs the life of the spark plug.

RECOMMENDED BY THE NATIONAL FORD OWNERS CLUB OF NEW YORK

This is not a spark gap, but a nitrogen transformer for tractor, stationary and marine engine users, as well as for motorists, thousands of whom are using it with perfect service. Recommended by university engineers and practical technicians.

The Super Spark effectually prevents the fouling of plugs by oil pumping cylinders. It enables broken porcelains to work perfectly. It saves platinum and breaker points from burning and eating away; and it prevents burnt-out coils and punctured condenser.

NO MORE ENGINE MISSING
MORE NEW PLUGS
MORE CLEANING PLUGS
MORE CARBONIZED PLUGS

THE SUPER SPARK

Sold with a two-year guarantee. Price, $2.25 each, or $9 for a set of four.

Super Spark Company of Canada 44 SIMCOE STREET OSHAWA, ONT.

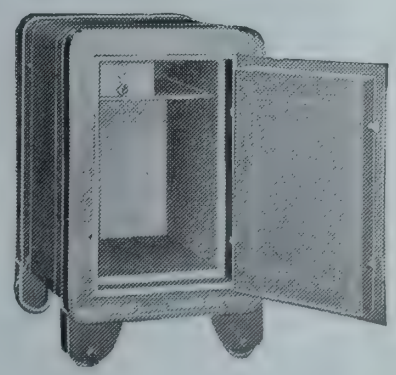
Eastern Distributor: Vlit Manufacturing Co., 223 McGill St., Montreal.

Western Distributor: Shell Supply Co., 509 McGreevy Bldg., Winnipeg.

Exclusive representatives wanted for counties and townships.

SPECIAL OFFER!

This ad and $1.50, mailed or presented to our Oshawa office only, entitles you to one only Super Spark with full instructions.



Security for your Victory Bonds, Sales Notes, etc.

Safety First!

Don't leave valuable papers and documents lying about the house, where they can be stolen, burned or mislaid.

Put them in a real Made-in-Canada, fire-resisting steel cabinet, with combination lock. No needless searching for what you want. Everything right to hand.

This is a splendid opportunity for implement dealers. Write for prices and full particulars at once.

J. & J. Taylor, Limited

TORONTO SAFE WORKS

Toronto, Canada

Amendments to Ontario Motor Act

AT the 1919 session of the Ontario Legislature the following important changes were made in the Motor Vehicles Act:

RECKLESS DRIVING

Provision is made increasing the penalty for reckless driving whereby anyone found guilty of this offence shall be liable for the first offence to a penalty not exceeding $50, or one week's imprisonment, or both; for the second offence to a penalty, not exceeding $100, or one month's imprisonment, or both, and for the third or any subsequent offence to imprisonment not exceeding six months.

NOISE MUFFLER

Every motor vehicle shall be equipped with a noise muffler and no contrivance for releasing such muffler shall be attached to the motor vehicle so that it may be operated from any seat in the vehicle.

MIRROR

Every motor vehicle used for commercial purpose shall be equipped with a mirror securely attached to it and placed in such a position as to afford the driver of such motor vehicle, while driving or operating the vehicle, a clear view of the roadway in the rear or of any vehicle approaching from the rear.

REWARD ON CONVICTION

By-laws may be passed by the councils of all municipalities for paying, on the conviction of the offender and on the order of the judge or police magistrate before whom the conviction is had, a reward of not less than twenty dollars to any person who pursues and apprehends, or causes to be apprehended, any person stealing a motor vehicle within the municipality.

LETTING OR HIRING

No person shall hire or let for hire a motor vehicle unless the person by whom such motor vehicle is to be driven is a person licensed to drive a motor vehicle as required by this act, or is a person to whom a permit has been issued pursuant to section 3 of this Act, or is a person to whom a certificate of competency has been issued by the Minister of Public Works and Highways.

SERIAL NUMBER OBLITERATED

No person shall buy, sell, wreck or otherwise deal with any motor vehicle whereof the manufacturer's serial number or similar identifying mark has been obliterated or defaced or is not readily recognizable.

CAR NOT CALLED FOR

Where any motor vehicle is placed in the possession of any person who buys, sells, wrecks, or stores motor vehicles, and the same remains in his possession for more than two weeks without good reason, such person shall forthwith, upon the expiration of the said period of two weeks, make a report thereof to the Minister of Public Works and Highways.

RECORD OF SECOND-HAND VEHICLES

All persons who buy, sell, wreck, or otherwise deal in second-hand motor vehicles shall keep a correct record of all motor vehicles bought, sold or wrecked, and of such information as will enable such motor vehicles readily to be identified, and shall transmit weekly to the Department of Public Works and Highways on forms furnished by the Department a statement showing all motor vehicles bought, sold or wrecked by him during the week contained, and such information with reference thereto as may be required by the Department.

RATE OF SPEED

No motor vehicle shall be driven upon any highway within a city, town, village or police village at a greater rate of speed than twenty miles per hour; nor upon any highway outside of a city, town, village or police village at a greater rate of speed than 25 miles per hour, nor at a street intersection or curve where the driver of the vehicle has not a clear view of approaching traffic at a greater rate of speed than 10 miles in a city, town, village or police village, but the council of a city, town or village may by by-law set apart any highway or any part thereof on which motor vehicles may be driven at a greater rate of speed for the purpose of testing the same, and may pass by-laws for regulating and governing the use of any such highway or part thereof for such purpose.

Points in Tractor Lubrication

By WILLIAM ANWYL JONES

IN the purchase of a tractor for farm use a feature that is of vital importance to the life and efficiency of the machine is frequently overlooked. Correct lubrication means less friction and waste of power, longer life and better satisfaction all around to the user.

This is particularly important in the case of a kerosene burning tractor. If even a small quantity of kerosene is permitted to mix with the lubricating oil that serves the motor bearings it quickly vitiates it and, no matter how good the quality of the bearings, they will burn out very quickly. With a vertical motor it has been demonstrated that the waste of unburned kerosene is much greater than is the case in horizontal motors of proper construction. If the combustion is not perfect, as is the case with the great majority of kerosene burning motors, the unused kerosene creeps past the piston rings and drips into the crank case. Unless there is some special device to prevent this kerosene from mixing with the lubricating oil the latter, as stated, quickly deteriorates and loses its lubricating qualities. Manifestly where the splash system is used in the motor, unless the crank case is automatically drained, this mixture will cut out the bearings in short order and the tractor will become inefficient.

The instruction books put out by most kerosene tractor manufacturers insist upon the importance of draining the crank case every day—some of them oftener. Writers on lubrication sometimes recommend straining this oil as it is drained from the bottom of the crank case and using it again; but it is manifestly next to impossible to eliminate the kerosene when once it is mixed with the lubricating oil. The impurities can be strained out and the oil may be fit to use again; but really it is dangerous to use it in the crank case, although it will not injure the gears. Anyone can realize at once that it is wasteful and expensive at best to be compelled to throw away the high priced oil on account of its having been mixed with kerosene.

Where the fresh oil is forced, under pressure, direct to the centre of the motor bearings, as is the case with a few tractors which are scientifically designed, this trouble is largely eliminated; although where any kind of a splash system is used in the motor there is still danger of bad effects from the kerosene in the crank case. The ideal arrangement is one which positively prevents the kerosene from touching any of the oil that can reach the connecting rod bearings, and which provides for its automatic removal from the crank case. This can be so designed that the overflow is mechanically drained to the gear cases, where it not only can do no harm, but where the oil still has sufficient life to lubricate the gears satisfactorily, and then, as is the case with one well-known and successful tractor, it may be automatically drained to the final roller drive so as to keep the latter lubricated, and thus after being used in three different parts of the tractor the waste oil is voided out onto the ground.

These interesting potographs vividly contrast the old and new methods of plowing—with three yoke of oxen abreast, and with a tractor.

Selecting the Right Lighting System

What to Consider When Buying or Selling a Plant for Private Use

"When one of Canada's largest corporations (I can't mention the name here) buys an electric storage battery it asks one question: 'What is the area of each positive plate and how many are there in each battery cell?' "

The salesman tipped his chair back and looked around at the others with the idea of letting that "sink in." Then he resumed:

"If these people are as interested in that one point it strikes me that that's the one thing everyone buying a lighting plant with a storage battery should be interested in. It's the question that should be asked first —or, inversely, it's the point the salesman should explain first.

"You know a man will come in to buy a tractor, a motor car, a ditcher or a water system without any hesitation, but when it comes to an electric lighting plant there's always that mysterious box that the 'juice' comes from—the battery. He can see the rest of the outfit and in a general way knows how it operates, but the battery is a puzzle and he has to be 'sold' before he'll buy.

"So remember this: The gauge of a battery's capacity, what the big corporation wants to know—the superficial area and number of positive plates—is what the ordinary man wants to know, only he doesn't know how to ask about it, and when he's told it must be in a most untechnical way. To be sure there are other things to be told, but there is a lot of misunderstanding about the battery that may make or break a sale.

"The larger the surface of the positive plates, the greater the capacity, the larger number of lights and the longer the battery will operate on one charge. The capacity of a storage battery is known technically as so many 'ampere-hours.' What this means in plain King's English is how many hours it will keep so many lights burning and keep them burning at full power.

"There has been a new-fangled term evolved in the States known as 'intermittent service.' Everyone knows that if a battery is given a rest it recovers some of its power —that is it gets its second wind—and some salesmen are out selling what the battery does rather than what the people made it have done. Every battery acts the same in this respect. 'Intermittent service' can't be depended upon like the honest old way of measuring exactly the amount of current stored up in the battery.

"To all outward appearances all lighting outfits are much alike—an engine, a generator, a battery and a switchboard—but believe me, there is a difference. As a man of experience in such lines, I always say 'buy the separate unit plant and make sure the battery has the greatest superficial area of positive plates possible to a plant of the size required.' That, I think, sums the thing up pretty well.

"Now, you see, while we have taken hold of the question in the middle, we have hit the most vital part of it—the part that every man who is selling lighting plants should tell his prospective customer.

" 'Separate unit' is another thing to remember. This is not so hard, because it simply means that the engine, generator, battery and switchboard are separate. There's a big advantage in this. Of course, the switchboard does not mean so much to the purchaser, but be sure you have one that you can fasten against the wall where it won't receive all the shaking of the engine. The battery I have told you about. And now I want to say something about the engine and the generator.

"When the engine and generator are combined, as they are in some plants, it has its advantages and its disadvantages. It means a more compact, prettier plant—just the plant for a rich man or to install where the space is limited, but there are other limitations besides the space.

"The engine has to be speeded up and the generator slowed down. This means that the generator must be wired differently, and consequently costs more if the necessary power is to be obtained from it. The most practical arrangement is the plant whose engine is belted to the generator—an engine of say 3 or 6 horse-power. The matter of speed of the generator is then easily regulated by the ratio of the pulleys and per unit of power developed it will be found that this larger engine—the separate unit engine is nearly always larger—is more economical to operate.

"Now there is another big advantage. In the separate unit plant the owner has not only an engine to operate his electric lighting system, but a power unit that will run his cream separator, his churn, his saw, his water system and do many other things where separate power is required without buying a lot of small motors, and the separate engine can do a lot of other work at the same time it is charging the battery. That I consider is one of the big selling points of the separate unit plant."

The salesman tipped his chair back again. He viewed his audience and then resumed:

"All this is why, when anyone asks me about a lighting system, I always recommend the Fairbanks-Morse Type F plant. It combines all of what I consider the essential features of an efficient and economical plant. Of course, I have nothing to do about selling these plants, but as a mechanical man and one naturally interested in these things, I can quickly distinguish the good features. The trouble with you fellows is this—when you sell an electric lighting plant you describe it in terms too technical for the purchaser to understand and he gets scared or, if you don't happen to know you get scared, and the result is many times a sale lost.

"Always remember this—size or area and number of positive plates. That's what tells the capacity of a battery. Number of hours of straightaway current for the required number of lights—never mind the 'intermittent stuff'—is another thing to be remembered. And then there is the separate engine—the engine that furnishes power enough for the lighting plant and enough more to do other work. This is the easiest plant to sell and the most satisfactory plant to the customer.

"This type of plant can be quickly converted into an automatic affair, made to begin charging at the touch of a button and stopping automatically when fully charged.

"There's one feature about the Fairbanks-Morse Type F plant that appeals to me, and that is the engine. These people have made their "Z" Engine the power unit for this outfit, and the "Z" has long since established itself as an engine particularly adapted to farm work—a powerful, sturdy, economical engine, burning cheap fuel. They tell me that over 200,000 farmers are using the Fairbanks-Morse "Z" Engine, and that's a pretty good recommendation for it.

"Now, if there's anything you want to know about the separate unit electric lighting plant, just use this coupon."

The Canadian Fairbanks-Morse Co., Limited,

St. John, N.B.; Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria.

Send me information about the Type F Electric Lighting Plant without obligation to me.

. . . . . .

. . . . . .

. . . . . .

Made in Canada

DIXIE "ACE"

Brings

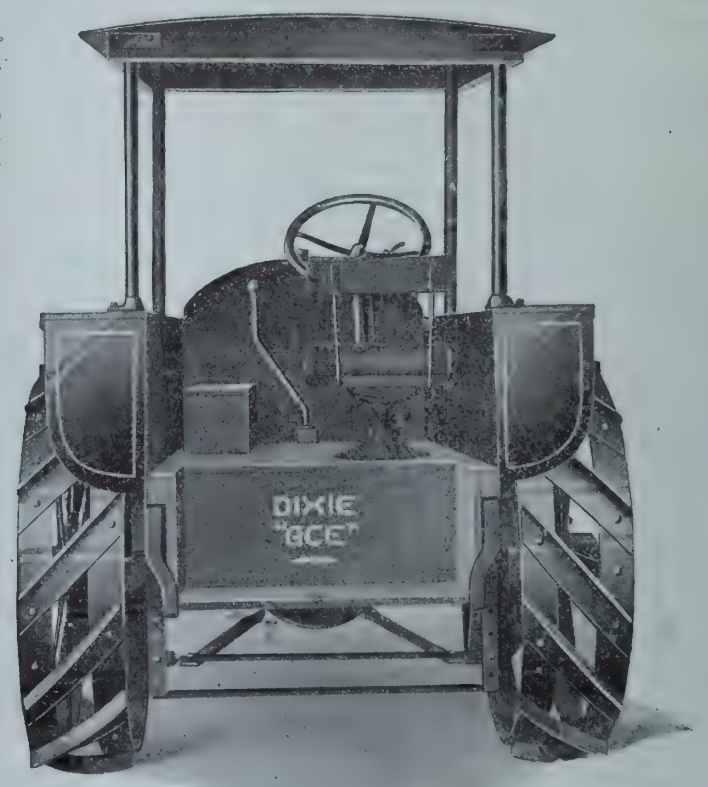
Dollars to Dealers

Everyone is talking about the DIXIE "ACE"—it is the "Latest and Greatest Tractor Success." It sells easier, because it fills the requirements of the average farmer better than they have ever been filled before.

The neat, graceful lines—compact, sturdy construction—and startlingly sensible service features appeal to the ordinary average farmer—the hundred-acre man, who forms 98% of the farming community. Every farmer is a prospect for a DIXIE "ACE."

The DIXIE "ACE" weighs 3,350 lbs.—has a 69" wheelbase—a speed range of 1 to 6 miles—all gears entirely enclosed running in oil—wonderfully efficient drive wheels of new and exclusive design—comfortable cushion seat and roomy covered cab—plenty of power for any farm—and the price is so reasonable that there is hardly a farm in Canada on which it would not be an investment paying the highest dividends.

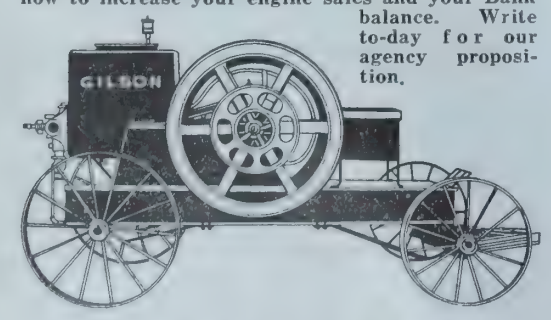
Turn this over in your mind—why shouldn't you be the man to reap this golden harvest? If you are an aggressive dealer, of good local standing, write us TO-DAY. Act quickly as the season is just starting.



GILSON ENGINE

"Goes Like Sixty"

Are you making as much money out of your engine sales as you should? Are you selling as many engines as you should? Let us show you how to increase your engine sales and your Bank balance. Write to-day for our agency proposition.

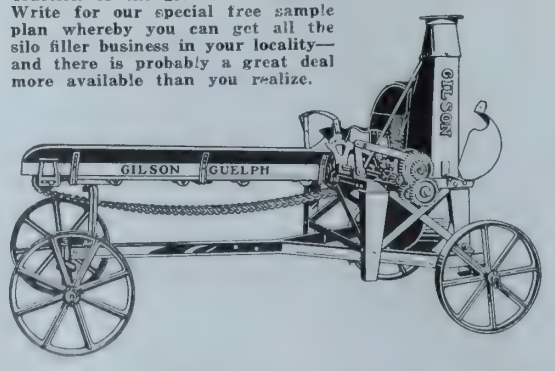


SILO FILLER

The Wonderful Gilson

The Lightest Running Blower Cutter made

The supremacy of the Gilson Silo Filler is unquestioned. It does what has heretofore been considered impossible. Do not be satisfied to sell a substitute and only get a fraction of the silo filler business from your territory. Write for our special free sample plan whereby you can get all the silo filler business in your locality—and there is probably a great deal more available than you realize.

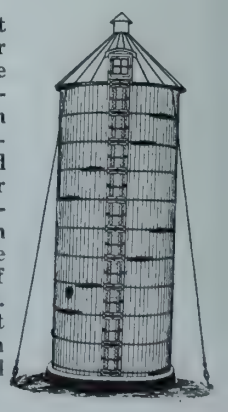


HYLO SILO

The Mortgage Lifter---

The Money Maker

The "Hylo" is different and distinctly superior to any other silo. The hoops automatically expand and contract with the silo—patented, combination door lock and ladder—reinforced door frame—positive anchoring system—our own wonderfully fine grade of Imported Long Leaf Yellow Pine is used. Your customers want the "Hylo"—sell them what they want and make more money.

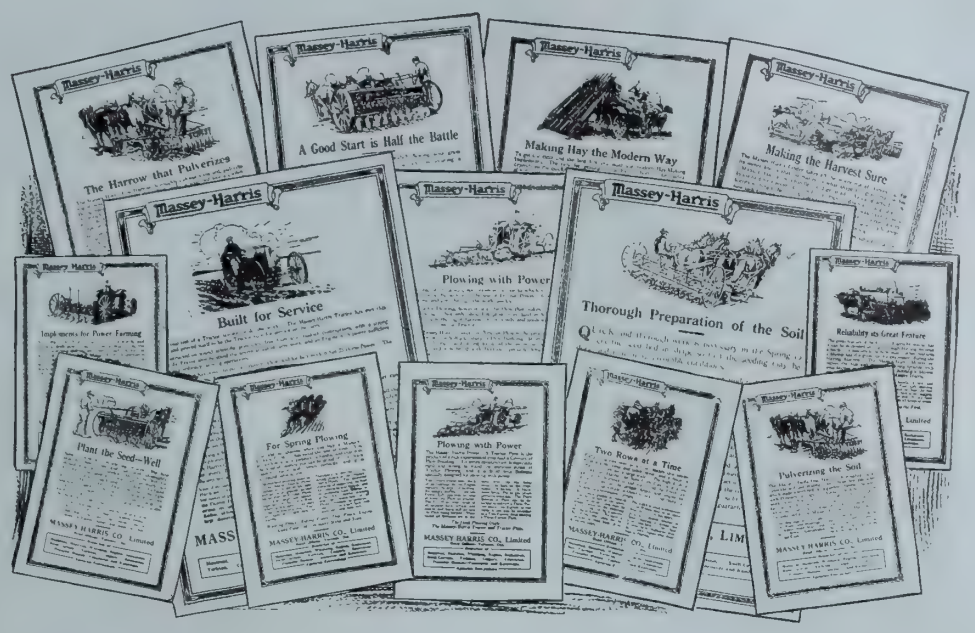


GILSON MFG. CO., Limited,

Dept. A, - GUELPH, ONT.

Dept. AA, WINNIPEG, MAN.

Massey-Harris



Ads that Help the Implement Dealer

THE advertisements reproduced above are a few of a series now appearing in all of the leading Farm Papers.

Every Implement Dealer realizes how much easier it is to sell a well advertised line of implements. This is because the "Prospect's" mind has been favorably impressed by reading the ads, and in fact, in many cases, the reading of the ads creates your "Prospect."

This farm paper series, together with our Direct-by-Mail Advertising, consisting of numerous, attractive folders, are a powerful factor in preparing the way for the Massey-Harris Agent and making it easy to sell Massey-Harris Implements.

No need to explain who Massey-Harris is, and what the name stands for. It is known to all farmers and stands for the best in farm implements, and has done so for generations.

Applications for representation in vacant territories should be addressed to the manager of the branch nearest you.

High Quality Implements --- Well Advertised

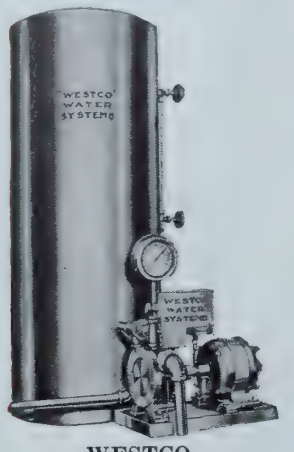
MASSEY-HARRIS CO., LIMITED

HEAD OFFICES—TORONTO, ONT.

Branches at

Montreal, Moncton, Winnipeg, Regina, Saskatoon, Swift Current, Yorkton, Calgary, Edmonton. *Transfer Houses*—Vancouver and Kamloops

LANGSTADT-MEYER
The most economical and efficient equipment for propositions requiring from 200 lamps up.



WESTCO
WATER SYSTEM
Abso.utely automatic. In any required size — from 200 gallons to 50,000 gallons per hour.

Sell the plant you know is right

FARMERS are going to have electric plants. Churches, schools, stores, rural communities are going to have electric plants.

They want light — power — running water.

They want the conveniences that city people enjoy—the conveniences that electricity brings.

And they can afford to pay for them!

Go after this business with the right sort of plant! Go after this business with the backing of a house that is organized to give you real service and co-operation!

We Have The Big Capacity Plant Farmers Need!

Grace Motors, Limited, handle power and water equipment farmers need. We take great care to select the products we handle. We consult with our engineers. We examine the needs of farmers. We satisfy ourselves on the manufacturers' organization, plant, finances, plans.

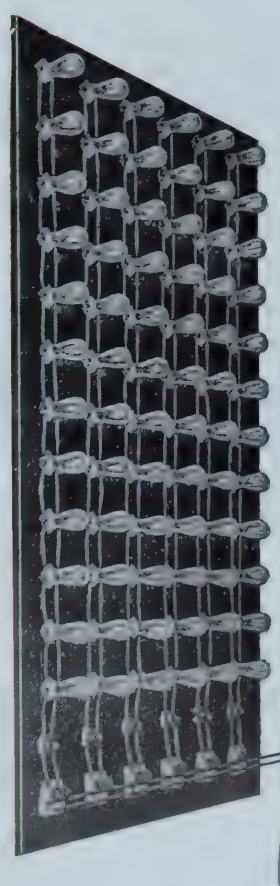
We have room for *more* live business agents!

A Complete Line

In the PHELPS light and power plant we offer you a real opportunity of making big money. We offer you a plant that meets the farmer's needs—that has BIG overload capacity, simple design, and sturdy construction. A plant that has not only one but SCORES of selling features.

The LANGSTADT-MEYER is a plant you can sell to churches, county estates, garages, moving picture theatres, VILLAGES! It comes in 3 sizes—from 200 lamps up. In the Westco Automatic Pump we offer you a water system to fit any rural needs.

A complete line—each plant giving the most capacity for the least money.



The PHELPS light and power plant has big overload capacity; 72 twenty-five watt lamps, 1,800 watts, 4 h.p. engine for direct power. The plant the farmer needs.

A Start Now Means Big Business For You!

Our lines, backed by full-page advertisements on the back covers of farm journals, have opened up a big field for keen, energetic agents who are willing to work.

A field filled with opportunities for profitable business!

If you want a plant you'll be proud to sell—the kind that will establish you properly in this growing market, write us. Let us tell you the complete story of our different lines. Let us give you a business-like proposition that will interest you.

GRACE MOTORS LIMITED, *Export Managers*

243-255 Queen St. East, TORONTO

Grace Motors, Limited, are also Canadian distributors for STERLING Heavy Duty Trucks, Fulton 1½-ton Trucks, Atlas Delivery Cars, Smith Form-a-Trucks, Lay Porta Power, Lay Farm Equipment, Arnold Electric Tools, Veedor Odometers, Non-gran Bearing Bronze.

ACME VACUUM CLEANER CO., LTD.,
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KEYES SUPPLY CO., LIMITED,
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McNAUGHTEN, McKAY ELECTRIC CO., LIMITED,
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J. H. POLLOCK ELECTRIC LIMITED,
London, Ont.

MANIFOLD LIGHT & POWER LIMITED,
Distributors for Western Canada,
240 Main St., Winnipeg.

CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

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VOL. 1, No. 6 TORONTO, AUGUST, 1919 Subscription Price $1.00 Per Year

Reliable Power at Low Cost

The principle back of the operation of the Fairbanks-Morse "Z" Engine is Economy — Economy of first cost, upkeep and fuel cost, that over 200,000 farmers have proved by actual use. To the dealer

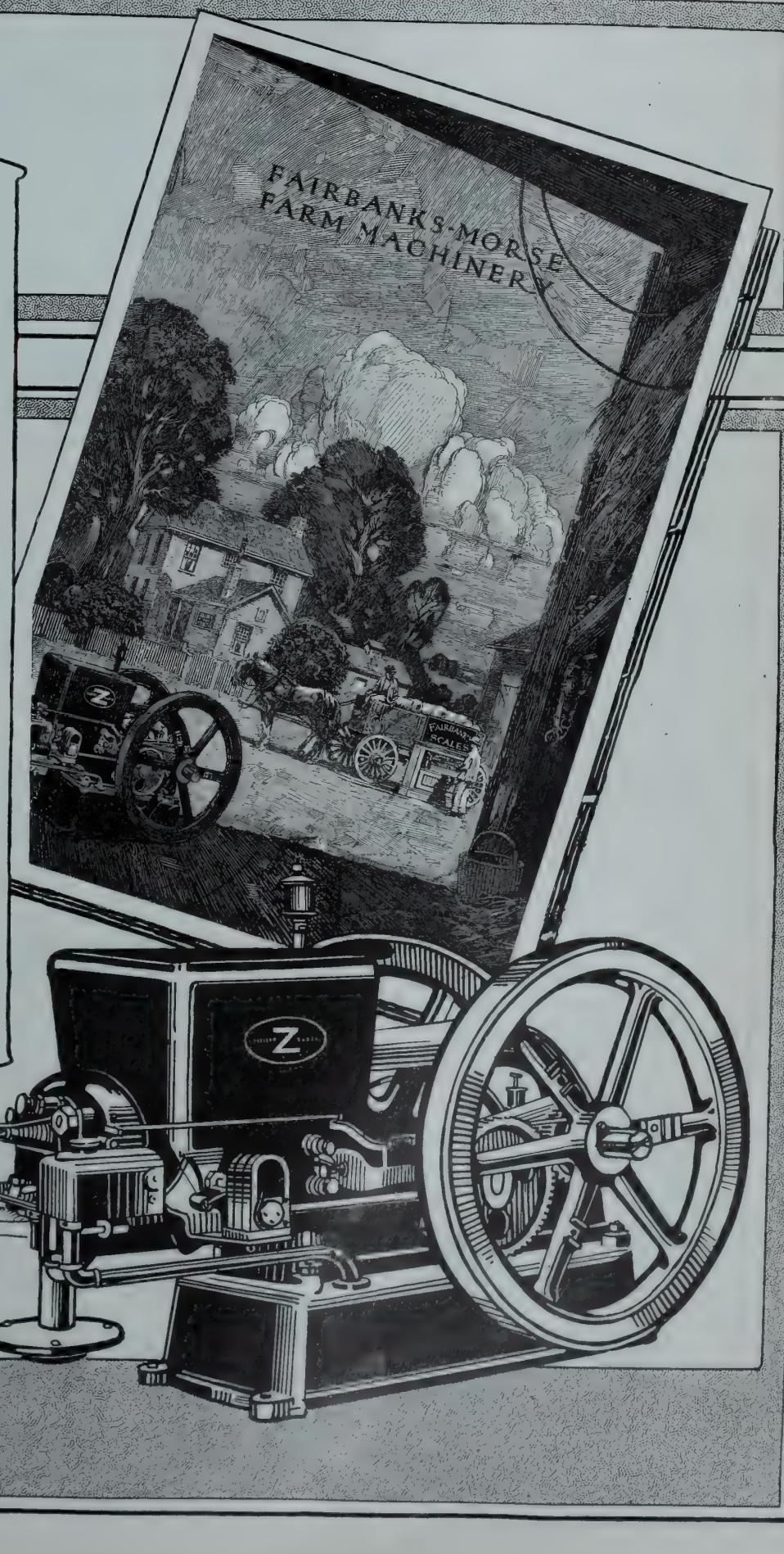
Fairbanks-Morse "Z" Engines

offer a profit-making article of sale, with every progressive farmer in his community as a prospective customer.
The satisfied 200,000 have found that the "Z" gives more than rated power, that it is the practical unit for the operation of all power machinery for the farm. The farmers in your territory can be "sold" on the same points.

Our book, "Fairbanks-Morse Farm Machinery," is a helpful guide to the man who is interested in putting the farm on a business-like basis. Write today for this book.

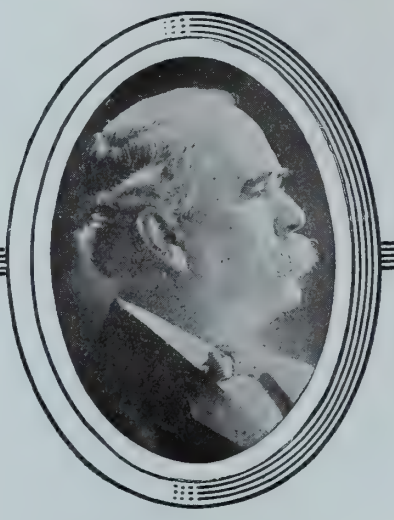
The Canadian Fairbanks-Morse Co., Limited

Halifax, St. John, Quebec, Montreal, Ottawa Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria.



THERE ARE NO SUBSTITUTES FOR DAIRY FOODS

P.M.Sharples



THE above slogan appearing in every advertisement of the Sharples Separator Company is the slogan of every North American dairyman.

For nearly forty years, Sharples has been identified with the North American dairy industry and at all times has been fighting for the ideals of the North American dairyman.

For nearly forty years the Sharples dairy machines have been the standard for North American dairymen. Dealers identified wtth the Sharples institution realize the value of this Sharples goodwill.

The Sharples Separator Co., Toronto, Ont. Regina, Sask.

THE LOUNSBURY CO., Newcastle, N.B.

DISTRIBUTORS THROUGH ALL THEIR BRANCHES

"Over 2,425,000 Sharples Separators in Daily Use"

J. CLARK & SON Fredericton, N.B.

P-65

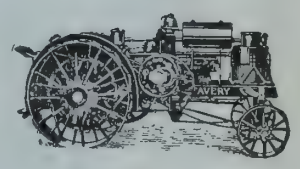
MELOTTE CREAM SEPARATORS : : LISTER GASOLINE ENGINES

Don't miss this year's Special Exhibit of Lister Farm Power Machinery at the Toronto Exhibition

Lister
POWER ON THE FARM

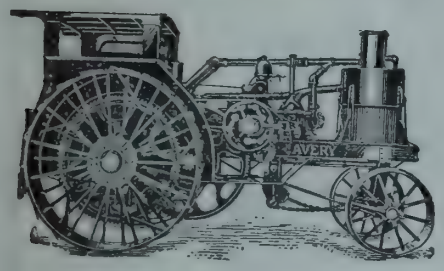
Come and see the much-talked-of Lister Line of past exhibitions together with new additions—the line that is World famous for its quality, efficiency and service.

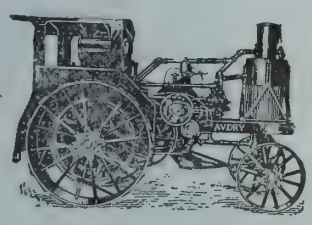
Avery Tractors

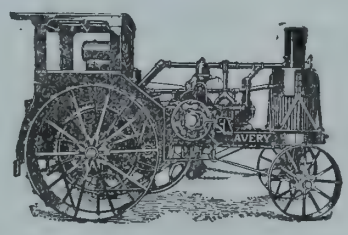


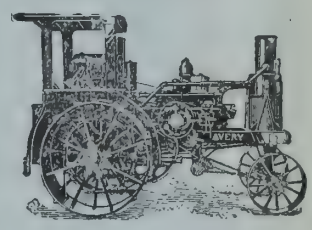
A size tractor for every size farm, all sizes from 8-16 h.p. up have a standardized design, with every part built especially for tractor use, and every part so designed that the owner can make his own adjustments and repairs.

Ask for full particulars when at the Exhibition—or write us. The Avery has many interesting exclusive features.





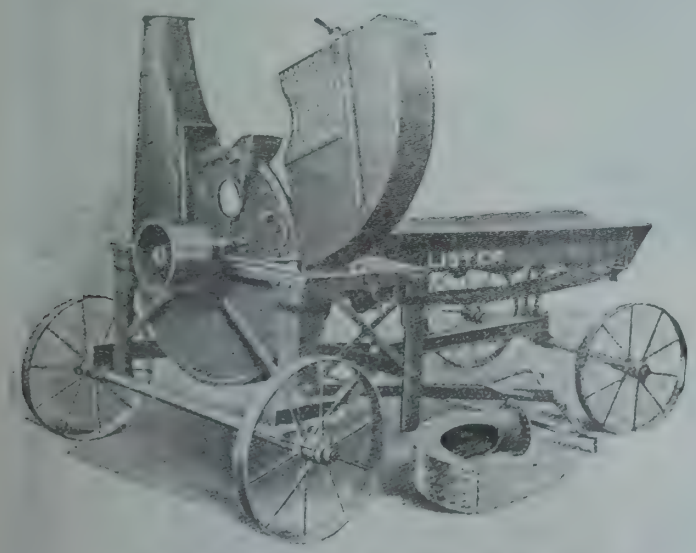


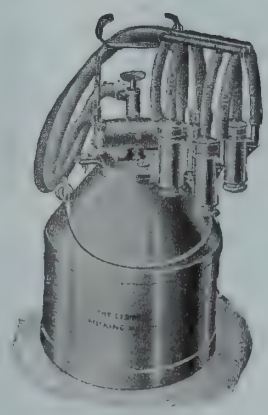


The "Lister" Ensilage Cutter

Durability, plus speed and safety, are the ideas that predominate in the manufacture of "Lister" Ensilage Cutters and Blowers.

Made in Canada—it has all the makings of long service.





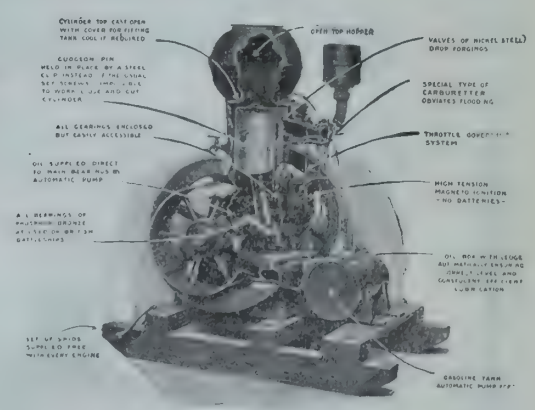
The "Lister" Milker

It's the ONLY milker for "those who know." Milks like the calf sucks—**the cows like it.** Can be used on all grades and breeds with entire safety.

Lister Agents Make A Substantial Commission

"Lister" Engines

2, 3, 5, 7, and 9 h.p.—Standard Hopper Cooled, throttle governed, automaticlly lubricates and equipped with high tension magneto. Constructed by special means to meet your special needs. Simple—easy to operate, economical. They do the most for the least money. Made in England—of true British quality throughout.


OPEN TOP HOPPER
VALVES OF NICKEL STEEL DROP FORGINGS
SPECIAL TYPE OF CARBURETTER OBVIATES FLOODING
THROTTLE GOVERNING SYSTEM
HIGH TENSION MAGNETO IGNITION —NO BATTERIES—
OIL RUNS WITH LODGE AUTOMATICALLY ENSURING PROPER LEVEL AND CONSEQUENT EFFICIENT LUBRICATION
GASOLINE TANK AUTOMATIC PUMP FED

R. A. LISTER & CO. (CANADA) LIMITED

58-60 Stewart Street, TORONTO -:- **Also at Wall Street, WINNIPEG**

LISTER ELECTRIC LIGHTING PLANTS. LISTER GRINDERS. PREMIER CREAM SEPARATORS

Made in Canada

DIXIE "ACE"

Brings

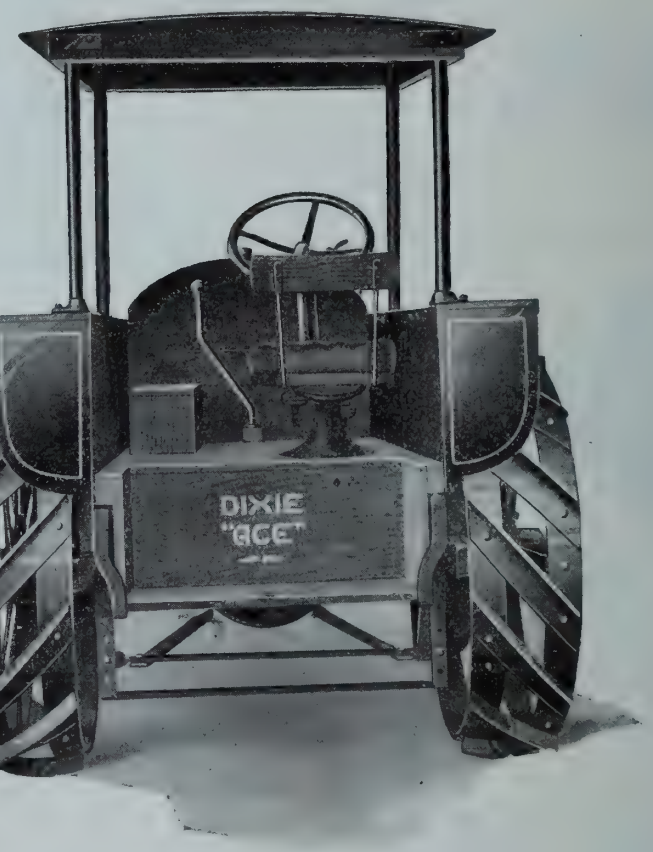
Dollars to Dealers

Everyone is talking about the DIXIE "ACE"—it is the "Latest and Greatest Tractor Success." It sells easier, because it fills the requirements of the average farmer better than they have ever been filled before.

The neat, graceful lines—compact, sturdy construction—and startlingly sensible service features appeal to the ordinary average farmer—the hundred-acre man, who forms 98% of the farming community. Every farmer is a prospect for a DIXIE "ACE."

The DIXIE "ACE" weighs 3,350 lbs.—has a 69″ wheelbase—a speed range of 1 to 6 miles—all gears entirely enclosed running in oil—wonderfully efficient drive wheels of new and exclusive design—comfortable cushion seat and roomy covered cab—plenty of power for any farm—and the price is so reasonable that there is hardly a farm in Canada on which it would not be an investment paying the highest dividends.

Turn this over in your mind—why shouldn't you be the man to reap this golden harvest? If you are an aggressive dealer, of good local standing, write us TO-DAY. Act quickly as the season is just starting.



GILSON ENGINE

"Goes Like Sixty"

Are you making as much money out of your engine sales as you should? Are you selling as many engines as you should? Let us show you how to increase your engine sales and your Bank balance. Write to-day for our agency proposition.

SILO FILLER

The Wonderful Gilson

The Lightest Running Blower Cutter made

The supremacy of the Gilson Silo Filler is unquestioned. It does what has heretofore been considered impossible. Do not be satisfied to sell a substitute and only get a fraction of the silo filler business from your territory. Write for our special free sample plan whereby you can get all the silo filler business in your locality—and there is probably a great deal more available than you realize.

HYLO SILO

The Mortgage Lifter---

The Money Maker

The "Hylo" is different and distinctly superior to any other silo. The hoops automatically expand and contract with the silo—patented, combination door lock and ladder—reinforced door frame—positive anchoring system—our own wonderfully fine grade of Imported Long Leaf Yellow Pine is used. Your customers want the "Hylo"—sell them what they want and make more money.

GILSON MFG. CO., Limited,

Dept. A, - GUELPH, ONT.
Dept. AA, WINNIPEG, MAN.

More Kinds of Work
More Days in the Year

with the

Cletrac
TANK-TYPE TRACTOR

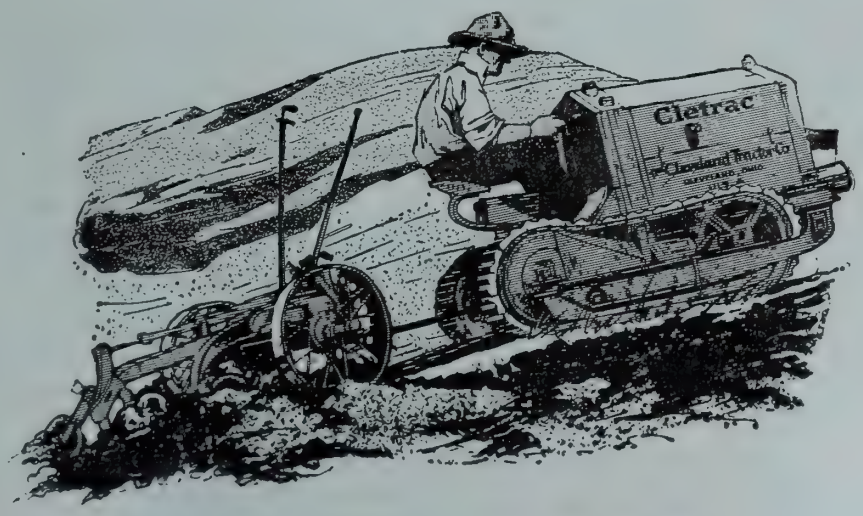
(Formerly known as the Cleveland Tractor)

The farmer wants a tractor to do a good deal more than plow. He wants it to do his harrowing and seeding and harvesting and hauling and belt work.

He wants a tractor that will take the place of his horses and mules.

The Cletrac works on plowed ground, wet ground, or loose, sandy soil. It doesn't pack. It doesn't slip. It doesn't tip over. It goes over the top of the soil on the two metal tracks it lays down. It's the all-purpose tractor the farmer has been looking for.

If you want a tractor that will carry your tractor sales "over the top", write us about the Cletrac Contract.



A powerful two-plow tractor at a reasonable cost

The Cleveland Tractor Co. of Canada, Limited

25 Hydro-Electric Building
Windsor, Ontario, Canada

Largest Producers of Tank-Type Tractors in the World

Selecting the Right Lighting System

What to Consider When Buying or Selling a Plant for Private Use

"When one of Canada's largest corporations (I can't mention the name here) buys an electric storage battery it asks one question: 'What is the area of each positive plate and how many are there in each battery cell?' "

The salesman tipped his chair back and looked around at the others with the idea of letting that "sink in." Then he resumed:

"If these people are as interested in that one point it strikes me that that's the one thing everyone buying a lighting plant with a storage battery should be interested in. It's the question that should be asked first —or, inversely, it's the point the salesman should explain first.

"You know a man will come in to buy a tractor, a motor car, a ditcher or a water system without any hesitation, but when it comes to an electric lighting plant there's always that mysterious box that the 'juice' comes from—the battery. He can see the rest of the oufit and in a general way knows how it operates, but the battery is a puzzle and he has to be 'sold' before he'll buy.

"So remember this: The gauge of a battery's capacity, what the big corporation wants to know—the superficial area and number of positive plates—is what the ordinary man wants to know, only he doesn't know how to ask about it, and when he's told it must be in a most untechnical way. To be sure there are other things to be told, but there is a lot of misunderstanding about the battery that may make or break a sale.

"The larger the surface of the positive plates, the greater the capacity, the larger number of lights and the longer the battery will operate on one charge. The capacity of a storage battery is known technically as so many 'ampere-hours.' What this means in plain King's English is how many hours it will keep so many lights burning and keep them burning at full power.

"There has been a new-fangled term evolved in the States known as 'intermittent service.' Everyone knows that if a battery is given a rest it recovers some of its power —that is it gets its second wind—and some salesmen are out selling what the battery does rather than what the people made it have done. Every battery acts the same in this respect. 'Intermittent service' can't be depended upon like the honest old way of measuring exactly the amount of current stored up in the battery.

"To all outward appearances all lighting outfits are much alike—an engine, a generator, a battery and a switchboard—but, believe me, there is a difference. As a man of experience in such lines, I always say 'buy the separate unit plant and make sure the battery has the greatest superficial area of positive plates possible to a plant of the size required.' That, I think, sums the thing up pretty well.

"Now, you see, while we have taken hold of the question in the middle, we have hit the most vital part of it—the part that every man who is selling lighting plants should tell his prospective customer.

" 'Separate unit' is another thing to remember. This is not so hard, because it simply means that the engine, generator, battery and switchboard are separate. There's a big advantage in this. Of course, the switchboard does not mean so much to the purchaser, but be sure you have one that you can fasten against the wall where it won't receive all the shaking of the engine. The battery I have told you about. And now I want to say something about the engine and the generator.

"When the engine and generator are combined, as they are in some plants, it has its advantages and its disadvantages. It means a more compact, prettier plant—just the plant for a rich man or to install where the space is limited, but there are other limitations besides the space.

"The engine has to be speeded up and the generator slowed down. This means that the generator must be wired differently, and consequently costs more if the necessary power is to be obtained from it. The most practical arrangement is the plant whose engine is belted to the generator—an engine of say 3 or 6 horse-power. The matter of speed of the generator is then easily regulated by the ratio of the pulleys and per unit of power developed it will be found that this larger engine—the separate unit engine is nearly always larger—is more economical to operate.

"Now there is another big advantage. In the separate unit plant the owner has not only an engine to operate his electric lighting system, but a power unit that will run his cream separator, his churn, his saw, his water system and do many other things where separate power is required without buying a lot of small motors, and the separate engine can do a lot of other work at the same time it is charging the battery. That I consider is one of the big selling points of the separate unit plant."

The salesman tipped his chair back again. He viewed his audience and then resumed:

"All this is why, when anyone asks me about a lighting system, I always recommend the Fairbanks-Morse Type F plant. It combines all of what I consider the essential features of an efficient and economical plant. Of course, I have nothing to do about selling these plants, but as a mechanical man and one naturally interested in these things, I can quickly distinguish the good features. The trouble with you fellows is this—when you sell an electric lighting plant you describe it in terms too technical for the purchaser to understand and he gets scared or, if you don't happen to know you get scared, and the result is many times a sale lost.

"Always remember this—size or area and number of positive plates. That's what tells the capacity of a battery. Number of hours of straightaway current for the required number of lights—never mind the 'intermittent stuff'—is another thing to be remembered. And then there is the separate engine—the engine that furnishes power enough for the lighting plant and enough more to do other work. This is the easiest plant to sell and the most satisfactory plant to the customer.

"This type of plant can be quickly converted into an automatic affair, made to begin charging at the touch of a button and stopping automatically when fully charged.

"There's one feature about the Fairbanks-Morse Type F plant that appeals to me, and that is the engine. These people have made their 'Z' Engine the power unit for this outfit, and the 'Z' has long since established itself as an engine particularly adapted to farm work—a powerful, sturdy, economical engine, burning cheap fuel. They tell me that over 200,000 farmers are using the Fairbanks-Morse 'Z' Engine, and that's a pretty good recommendation for it.

"Now, if there's anything you want to know about the separate unit electric lighting plant, just use this coupon."

THE CANADIAN FAIRBANKS-MORSE CO., LIMITED,

St. John, N.B.; Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria.

Send me information about the Type F Electric Lighting Plant without obligation to me.

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CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Volume I | TORONTO, AUGUST 5, 1919 | Number 6

J. D. KOTTMEIER,
Sales Manager, John Deere Mfg. Co., Ltd.

Sell for Cash in the Fall!

When *YOU* have the Machines, and *HE* has the Cash

By JOHN D. KOTTMEIER

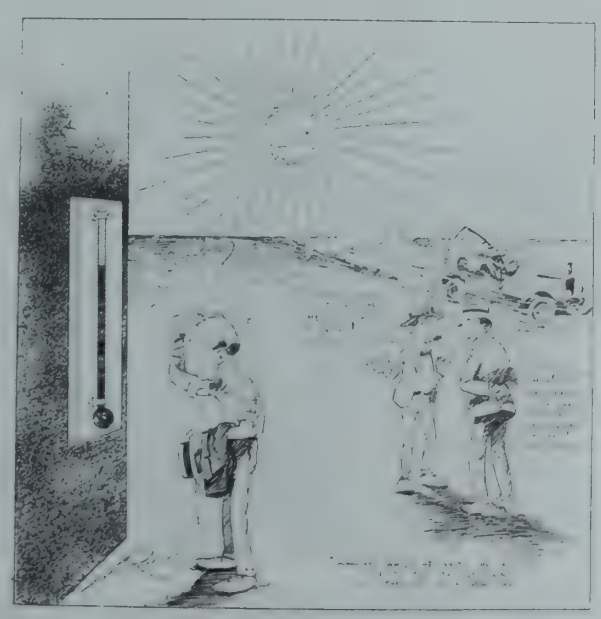
THERE was a time, and I believe you will agree with me, when farmers were the greatest calamity class of any known. If it was not too much wet weather, drought, or the wire worm, it was something else, but times have changed; the farmers of late years are coming into their own. It has been due them for a long while.

My opinion is that farmers are better posted than many dealers and manufacturers think; that they are reading and studying all the time, and since the automobile has come into general use, and farmers have been able to get around in the country, slip-shod methods of farming operations have given place to more scientific methods.

How many times during the forepart of the selling season, while soliciting orders, has your prospect told you that he was going to make the old machine do, that prices were too high, or that he would not buy until he saw how the present year's crop would come off? Now, outside of the real necessity for your prospective customer actually to require the machine that you have set out to sell him, that he can compete with his brother farmer in production, every dealer should keep it in mind that farming is a complicated business. It is a business that requires more forethought than, or equally as much as, any business on earth. There is no time of the year when the average farmer must provide for so much expense in preparing for his season's plans as in springtime, just at the season of the year when many dealers arrange to put in their hardest work in order to secure their business. There is no time of the year, probably, when the farmer's finances must be arranged so carefully as when he is preparing for the season's crops in the spring, consequently is it not natural that the immediate necessity, in many cases, of his requirements when he is about to get ready for the season, makes it easy for more sales? As these other expenditures and arrangements are paramount in his mind, however, the dealer can be only partially successful in securing his order.

THE average dealer will comprehend these conditions and oftentimes, as an inducement, will offer him time payments and, in some cases, extended time payments, a condition which is a detriment to business generally. Every dealer should recognize with the farmer now, that as in the days of old, he is not so much interested in time payments. The farmer does not care, nor is it as necessary for him now to mortgage his future, as in the past when conditions were so different, and he was struggling to make ends meet. Consequently, the proposition of extended time is not so attractive as in times gone by.

With these changed conditions, the average farmer to-day is more open and willing to secure the benefit of as low a price as he can by paying cash. The time of the year, therefore, when a farmer is most flush is after he gets his crops off; if he has not the money he has the grain or produce in his storehouse. List prospects who actually need the machines, and who have gotten through the season without buying new ones. Think of the cussing the farmer has done, in many instances, in getting along with the old machine. There is no doubt but that, many times in the field, he has concluded that he will certainly have a new implement for that business next year. The farmer should be interviewed again in the fall when his troubles are fresh in his mind, and, when he has the wherewithal in his storehouse or the elevator to pay for a new one. Then it is time, rather than to conclude that the fall is collection time only. That it is the best opportunity to approach him for his order for the new machine. Even if he does not buy the new one, you can get his order, then and there, for necessary repairs for the old one.



—"Motor World."

The prospect thinks the mercury will drop! A fat chance with that sun getting higher and higher!

HOW much easier you can improve your service to your customer by inquiring what he needs! One of the prevalent obstacles to more business being secured by the dealer of to-day, is that there are too many who are "sunny day and good roads" salesmen, who have cars and do not make provision for fall and winter campaigns—when the farmers also have more time and are in better position to discuss their requirements. Give your firm the name of this farmer, or other prospect, who is interested in any line. In this way not only can much information be given the prospect in detail about the implement he is interested in, but you obtain valuable assistance to help close the sale.

Sell the farmer what he wants, and see that it is something that he really needs.

There has been a great deal talked of about service to the farmer. Who is in the best position to provide this service? Does it not lie with you dealers? In order to get the business and give efficient service a dealer will anticipate to a fair extent his customers' requirements, and secure the machines that are adaptable and saleable in his territory. This will enable him to get the business by being able to make delivery.

There is every indication that from a purchasing standpoint the farmers of Ontario this year will break all records. They will be the year's biggest buyers. They have always afforded one of the largest markets, and now are one of the best. They have the money, and want the best goods there are, regardless of price.

IF there is any dealer or farmer in the territory who now thinks that prices of farm machinery are going to be lower within the next few months, he ought to read the opinions of experts in the iron and steel trade. Those who sell or use farm machinery and tools of all kinds should make up their minds that while all lines will eventually seek a permanent level, that level will be much less than maintained before 1914. Former prices are not likely to be reached in several years. They must adapt themselves to conditions as they are, and participate in the unparalleled prosperity which will remain for us for years to come. Any dealer slacking off in activity during the coming fall, in fact for many seasons to come, in the expectation of a slump in prices, will lose business to those who have faith in the future.

Have you figured the farmer in your sales plans at his full value for the coming fall? Do not simply look upon the fall season as a collection season only, and confine your whole selling operations to a few short months in the spring and summer. Start in early, after the harvest season is over, and not only follow up your spring prospects but look up new ones. Go over his present machines, after the crops are in, to find out just what is needed, in addition to endeavoring to secure the order for the new implements he needs. By keeping in mind the repairs required for the machines he has used, and by seeing that you obtain them for him, you will not only stimulate the farmer's interests in the good service you give him, but you also will induce him to take greater interests in the lines you are handling.

Don't simply look upon the fall season as the time to collect money.

Big Field in Western Canada for Trucks

By E. H. SCOTT

ONE of the extraordinary features about the development of the automotive trade in Western Canada is that while implement dealers, hardware merchants, and garage men are selling automobiles by the thousands to farmers, and while they are having great success in the sale of tractors, a very inadequate effort is being made to sell them motor trucks. More efforts should be made to educate them to see the benefits of the truck over the horse-drawn vehicle. This field is wide open for business.

Do the farmers want trucks?

They certainly do, and concrete evidence of the fact is furnished by replies made to an advertisement inserted in certain Western farm papers by a Moose Jaw firm. The manager of this firm was astounded at the results, particularly as two other lines he was handling were featured, with cuts, in the advertisement, while the reference to trucks was made in a scanty six words—merely the announcement that his concern were distributors.

Attached to the advertisement was a coupon in which they were interested, in order that they might be sent descriptive literature. The replies began to come in fast because the announcement was a very striking one, and as they came the Moose Jaw distributor, using a cardboard map of Western Canada, placed colored pins to designate the part of the country from which replies came. For the trucks he used a pink pin, and pretty soon the pink color began to blossom all over the map from the Eastern Saskatchewan boundary clear through to the Rocky Mountains. When the replies were all in it was found that 50 per cent. were enquiries with regard to the motor truck, or rather to an attachment which would convert a motor car into a motor truck. The main fact of the matter is that the farmers showed themselves conclusively to be interested in motor trucks.

THE Moose Jaw manager said that this surprising result of his advertising has never before been made public. He pointed out that only two of the replies concerning motor trucks had come from Manitoba, despite the fact that the magazines in which the advertisement was inserted had a heavy circulation in this province. In explanation of this he pointed to the network of railway lines covering the province, indicating short hauls from the farms to the track.

In Saskatchewan and Alberta it is different. Here it is necessary to make long hauls, of from 30 to 60 miles or more, in order to bring in supplies and haul out wheat. It is from this field that the replies came.

Recently this same distributor sent out a form letter to dealers in these two provinces seeking to place them as agents, and at the same time offering them a bonus for any prospective truck purchasers that might be closed. Immediately there came back the names of 20 prospective buyers, and more names were coming in every day, though for several weeks the Western strike disrupted the mails.

"The farmers of Western Canada have been buying automobiles on such a scale," said the Moose Jaw distributor, "that there are now comparatively few families without one. According to the official figures of Saskatchewan, there is one automobile to every 14 persons in that province and I guess the same is true in Alberta and in Manitoba. In any town of any size in these provinces the cars come to town in such numbers on a Saturday night that they almost block the streets, and traffic policemen are becoming the rule in many little villages and hamlets. In my opinion every owner of one of these cars is a prospective purchaser of a truck. He has become wedded to the gas idea to such an extent that he would just about as readily think of walking as going to the old-fashioned horse and buggy. And to think that a very short time ago the idea of the motor car in general use on country roads was thought to be an impossibility!

"THE big bugbear in the country is that many believe the motor truck cannot be used on country roads in their present state of development, neither is it thought possible to find a truck that will pull its load of wheat across the stubble from a granary in the centre of a field. In Western Canada the soil is heavy, and after a downpour of rain turns into a gumbo which makes traveling very difficult for any kind of vehicle. The farmers apparently do not take stock of the fact that every few months now cross country trips from ocean to ocean are being made with motor trucks in order that they may be tested out on every conceivable kind of road. They do not know, or they are not influenced by, the fact that motor trucks are now making scheduled trips in various parts of the United States and Canada without regard to road conditions or weather; they cannot be aware that contrivances have been made to overcome all conditions of road surface, even those of Western Canada. What could be worse than the sand roads on the Western American deserts where they are using trucks with wide-flanged wheels? Surely it is possible for a truck with modern equipment to go anywhere that a four-horse team will haul a wagon!

"But apart from all that," said the distributor, think of the economy in using a truck to haul wheat in the fall of the year when the roads are usually at their best in the West. Why, I know of a two-ton truck that was used to haul 9,000 pounds of potatoes from one farm to another the other day, and the same truck made a 62-mile trip with 160 bushels of oats, starting at 9 o'clock in the morning and concluding the journey at 4 o'clock in the afternoon. Think too, of the possibility of using wagon-trailers with these trucks when the roads are good. From the standpoint of economy they should very soon pay for themselves over any haul of fair length. And when the roads are bad let the farmer secure the right equipment for his wheels. At this very moment there is being manufactured in Winnipeg a traction rim adapted for just such an emergency. It can be bolted to the spokes and only comes into use when the tire sinks deep enough for it to hit the mud. In this way the resiliency of the tires is not affected.

"THE whole trouble is that both the manufacturers and the Western Canadian dealers are too apathetic. I prophesy that when the field is properly exploited there will be a rush to secure motor trucks, even at their present prices, that will surprise the most optimistic man in the trade. I think, however, that the attachments for converting an automobile into a truck will first come into general use and pave the way for the larger and more expensive trucks I think the proper line to take at this time is to institute a campaign of publicity, showing the farmers that the modern motor truck is adaptable for the West. Details should be secured and published with pictures showing the use of the motor truck under trying road conditions in various parts of the United States. Best of all, the manufacturers should send out their trucks on cross-country runs across the Western prairies, advertising well in advance the date of their arrival in each town. There must be pioneer work of this kind done before popular prejudice is overcome."

Cigars Pull Auto Sales

A CERTAIN manager of a popular garage in a town of some six thousand population made quite a success last summer selling automobiles. It was rather late in the spring when he obtained the agency for a good car, but after only a few weeks' advertising, so many people in his community wanted one of those cars that he could hardly get enough of them to supply the demand. The purchasers were mostly farmers, and this is the way he got in touch with them. First, he inserted in the county papers an advertisement like this:

THE COMMON PEOPLE'S CAR.

If you ever intend to buy an automobile, come in, as soon as you get the time, and look over the beautiful new car we handle. It is not too heavy, and not too light. It uses little gasoline, has plenty of power, and is up-to-date in every way. It is built for use, and the price is as popular as the car. Come in at once. The Popular Garage.

The above advertisement served to make the dealer known in the neighborhood, and brought many prospective buyers. But to better get in touch with those in the neighborhood who really figured on buying cars, the dealer used the following plan. He purchased wholesale a few boxes of good cigars, and had printed up several hundred small cards, containing:

GET A CIGAR FREE.

On the back of this card write the correct name and address of any neighbor who you know figures on getting a new car. Then drop the card in the card box, and get a good cigar free.
The Popular Garage.

THE box for the cards was made of wood, with a slit on the side for dropping in the cards; and the outfit, with a sign above it calling attention to the plan, was put up in a convenient place in the garage. Every car owner who came into the garage received one of the cards, and when he had filled this out, a cigar was presented to him. There were quite a few cards in the box every evening, and to each address the dealer sent the following circular letter:

"Dear Friend,—If you need a car, or intend to trade off your old one, we have something to offer you that is sure to please you. We are now handling a superior car, perhaps the most popular automobile of the day for the price. It is not too heavy nor too light. It is easy on tires and takes little gasoline, but at the same time has lots of power. It is fully equipped with self-starter, and electric lights, and is built for service and not for show. It is just the car for daily use, and the price will not give you sleepless nights. Many of your neighbors will soon be driving these cars, for the machines are going as fast as we get them home. We shall be pleased to have you come in and take a ride in one of these automobiles, so you can see for yourself what the cars are good for. But please come soon, or call us up by phone, and we will demonstrate the car at your home.

"Yours cordially,

"The Popular Garage."

As soon as any sales were made, these were reported to the local papers as news. Now it may be that the quality and price of this car had much to do with the business obtained, and it may also be that the agent's selling abilities were much above the average, yet who can deny that this dealer's success in making sales has been phenomenal, judging from the reports he gives? In three months he sold forty cars, and orders were still received faster than the cars could be obtained. It seems to me that no dealer could do better with any kind of a plan in a town of six thousand population.

THIS TRACTOR TAKES PLACE OF TWO MEN AND EIGHT HORSES.

Fordson tractor, with fender attachment over drive wheels, manufactured by a Winnipeg firm. They protect the driver from mud and dust. J. D. O'Brien, a farmer at Balcarres, the man in the rear, is using the machine to haul three 10-inch disc plows. He has fired the hired man and is doing the work of two men and eight horses by plowing ten acres a day. His horses have been turned out on grass. The man at the wheel is Ben Clark, implement agent at Balcarres, who has been called out from town to adjust the Oliver plows, which had a tendency to side slip in loose soil. A little experimenting and the use of a monkey wrench soon corrected this.

CANADA'S FARMERS WILL CASH IN ON BILLION DOLLAR CROP!

Count 'em: One and Nine Naughts --- $1,000,000,000

Motor, Tractor and Implement Dealers Can Look For Huge Harvest, Too, if They Guide the Farmer to Invest Wisely—In Up-to-Date Implements, and Time-Saving, Labor-Saving, Pleasure-Giving Machinery and Automobiles

CROP failures in Canada are always sectional and partial. Rumors from the affected zones travel faster than the breezes blow from the fat acres. Such is the case this year. Some stories would lead onlookers to expect a famine in Alberta. But things are not what they seem to these blue-ruin pessimists. One has only to recall 1915, when everybody was surprised to see how our 400,000,000 bushels of wheat rolled into the granaries. No whisper of our blessings preceded this threshing. In fact, many stories of poor crops did get into print, which only emphasizes the fact that crop shortages always bulk bigger in the average man's eyes than do the full yields.

Although 1919 has been a peculiar year throughout, there are many redeeming features that make interesting business futures. Production of any kind in this year of war's aftermath, need go little way to get a big price return, for every article of food or material is selling high. And the crop totals for the year, after the true estimates are corrected by threshing machine returns, will likely to be of a decidedly encouraging nature. Farmers are indeed fortunate in their business for another year at least.

LET us look at the crop outlook for the Dominion this year.

Eyes are generally turned westward to the prairie farms when Canada's total yields are being estimated, although the Eastern small farms total a greater valuation of all products.

The West has been hit in spots this year, especially in Alberta and Southern Saskatchewan. Manitoba has come through with a splendid prospect, while much of Saskatchewan is good enough for the average year.

In Ontario and the East generally, there will be a total valuation that will easily surpass pre-war years. The late wet spring prevented the seeding of hundreds of acres of barley and oats, and many more that went in late, will return a poor harvest. So that it is likely that coarse grains will be considerably scarcer and prices for feed will be high. Buckwheat has been sown on many farms and recent rains have started the crop off well. The money return from buckwheat is good, giving from $20 to $50 per acre.

Corn, roots, and fodder crops are good. Hay has been a big crop and has been well sown. These crops mean that rural Ontario will be fortified against winter scarcity in the feeding barns—a fact that spells dollars in beef, pork, and dairy products.

Fruit crops are not large, except in Nova Scotia, where they expect a million barrels of apples, but good prices are taking the raw edge off. Flax, sugar beets, beans and clover seed will furnish additional returns to the farms.

LIVESTOCK prices have been maintained well. Wool has returned as high as 65 cents for unwashed fleece. Beef prices have been stabilized in such a way as to hold down the situation well for the feeder. Cattle prices are receding easily enough to make the transition to normal free from disaster. Many cattle will go into stables this winter at prices lower than for the past three years, but with no great loss to the owners of grass. Hogs are a wonder. Unheard-of-prices still prevail, and if our inside trade with British consumers continues there is no fear of a serious porcine slump. Poultry have paid farmers almost a living wage by themselves for the same reason of a healthy overseas trade. So that all summed up, farmers are prospectively in a most fortunate situation. They have been saving money. They have not had their heads turned by prosperity, but have been reducing indebtedness, improving the productive capital and making wise investments. Consequently agriculture in Canada rests on a more even keel this year than for a generation past.

By F. M. CHAPMAN

The writer is editor of "Farmers' Magazine" and writes with authority.

AN estimate that seems quite justified from present indications, is made as follows for Canada. This wealth distributed among Canada's half-million farmers practically stabilizes business in the Dominion:

Agricultural Prospects for 1919

Crops	Yields (bus.)	Values
Wheat	190,000,000	$380,000,000
Oats	300,000,000	250,000,000
Barley	35,000,000	40,000,000
Rye	3,000,000	6,000,000
Peas	2,000,000	4,000,000
Beans	1,000,000	3,000,000
Buckwheat	10,800,000	11,000,000
Flax	7,000,000	35,000,000
Mixed Grains	13,000,000	18,000,000
Potatoes	80,000,000	80,000,000
Turnips, etc	70,000,000	28,000,000
Hay and Clover	15,000,000 (tons)	300,000,000
Corn (fodder)	4,000,000	20,000,000
Fruits	(estimated)	10,000,000
Sugar Beets	(estimated)	1,500,000
Totals		$1,200,000,000

Now to be on the safe side and allow for a possible slip before the finish, we will make the crop in Canada this year break over a billion dollars—not so bad an outlook for the future!

OF course these figures are much in the nature of the appellation given the U.S. agricultural statistics by some critics—"guesstimates," but nevertheless we deem their erring will be on the Conservative side.

Now then, while no one will argue for a reckless expenditure of farm savings in every line that a progressive manufacturer can put out, yet there is a wide justification for more enterprise on the part of many manufacturers getting their goods and even better goods out to the farm. Farmers are short of machinery, of a labor-saving kind. They need building materials of all kinds. There is a widening movement for better farm homes which will demand heating, lighting and running water equipment in greater quantities than most people dream of. There is great need for productive expenditures on lime, fertilizers, better seed, drains, fencing and power machinery. This field is open to those who are built to serve humanity. Exploitation is a by-gone order. Service as defined and practised by some big machinery firms is the best basis of business prosperity and co-operation. With such ideals of co-operation, business during 1919 and 1920 will go ahead with confidence in the outcome. Canada's future is almost as cheerful a one as can be descried throughout the nations.

Coach Customers Carefully

"I HAVE worked out a plan for instructing my customers, and will pass it along to other dealers," writes a Moose Jaw implement and tractor dealer. "Right here I desire to state that there is nothing radically new in my scheme. It's practical, that's all, and like other practical methods of doing business has a way of being successful.

"First of all I advise a thorough inspection of the entire tractor, not once a year nor once a month, but every day. I request my customers to set aside twenty or thirty minutes either before starting work in the morning, or at noon for this inspection. They aren't throwing away their time. The fact of the matter is, the time consumed in going over the tractor is comparable to the time which horse workers give their animals to make certain they are properly fed and watered, that the harness is in good shape, collars properly adjusted, etc. Who has heard a farmer complain of throwing away his time when attending to his work animals? It is equally true that time spent on tractor inspection is not wasted time, but on the other hand is the best insurance the operator can have that his machine is in condition to give uninterrupted service for hours without a rest. Naturally I do not allow my customers to run away with the idea that this daily inspection is complete insurance against trouble, and that nothing can happen to the machine during the interval which elapses between inspections. I merely emphasize the fact that trouble is less liable to occur if regular inspections are made. It is my belief, and I pass this idea to all my customers, that the operator of a tractor should keep his eyes and ears on the job, and be ready to detect any discordant note which may arise.

"WHEN some discordant note arises my advice is to stop—and stop without delay. An emergency inspection should then be made; frequently what later would mean ruined bearings or broken parts can be prevented if an examination is made in time, followed by the proper adjustments. Now it stands to reason that the place and time to do this work is wherever and whenever trouble is first detected, and not after one or two more rounds, or after the machine has been driven home. The most expensive repairs are those made when the tractor owner 'has time,' or after the machine is operated for any length of time after something gets out of adjustment. The same common sense principles which govern the driver of a Ford car may be kept in mind with benefit when operating a tractor.

"A man who sells tractors must of necessity meet all kinds of farmers, and he has an excellent opportunity to study human nature. It strikes me that a trait possessed by many of my customers is an unfailing belief that there isn't much meaning to the term, tractor operator. This viewpoint is a mistake, for I know that a tractor operator cannot be classed as efficient unless he can not only detect trouble, but also make repairs on his machine. Skill is required to repair a tractor; such skill comes from hard work, clear thinking and with practice doing the actual work.

"AFTER a tractor has seen considerable use, I advise a thorough dismantling of the machine. Work of this nature can be done on a farm during seasons when the tractor is idle part of the time. After being dismantled, all parts of the tractor should be cleaned, new parts decided on when needed, followed by a proper assembling, adjusting and testing out. Where this kind of work is done in the winter, a good work shop is required, and, for this reason, I advise my customers to equip their farms with a shop which is well lighted, equipped with the necessary tools, and can be heated during cold weather. As tractors come into more general use, and their operation and care are more thoroughly understood, work shops will be part of the power farmer's equipment."

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YOUR FALL SLOGAN

SELL for cash in the Fall!

We think this is a pretty fair slogan, and *you know* it's mighty good advice!

When is the farmer in the best buying mood? After he has harvested his crop, and has the cash in the bank, or the grain in the barn.

But, don't let him *keep* the money in the bank. He naturally wants to invest it. All right. *You* help him invest it. Point out that he needs a new disc harrow, manure spreader, or corn sheller. Ask him whether there has been any time during the past few months that the old, rickety machine has gone back on him. Demonstrate how he could have put in a larger crop if he'd had a tractor at the time he needed it most.

Then—point out where he can make bigger interest on his money than the bank can give him. Remind him that this is an investment—when he invests in useful, profit-producing implements—which he will always have under his eye. It's one he can *personally watch.*

Get out a paper and pencil, and go over with your prospects figures showing how many *dollars*, with feed at its present prices, his horses have consumed. He may be surprised to be shown that the four horses, which most tractors displace, will *eat* $900 *worth of feed in twelve months!*

Perhaps he's from Missouri. He may even look pityingly at you, as a fool, or call you an unmitigated liar!

All right.

Give him the paper and pencil.

"How much are your horses worth?"

Horse values will take a tumble, but he's pretty likely to admit that they're worth $160, anyway.

"All right. Put down: $640. How much grain can you raise per acre on your farm?"

"About 40 bushels an acre, if it's oats; about 25, if its' wheat," responds the farmer.

"At current prices that would average about $45 per acre, wouldn't it?"

"Yes."

"Now, the Government has gathered statistics which show that it takes the produce from five acres to feed a horse through the year. That's at least $225 for one horse, and $900 for the four. Then, it costs something to cultivate the 20 acres needed to feed four horses—will $5 an acre cover that?"

"Just about," the prospect will have to admit after scratching his head and thinking a moment.

"That's another $100. Now add it up."

The prospect does his own figuring:

"Feed for four horses for a year	$ 900
"Cost of farming 20 acres	100
"Value of horses	640
"Total	$1,640

"Well, is that accurate figuring?"

"Y—eee—s; it seems fair."

"And remember, you have no veterinary charges, harness to buy for those four horses, no bother feeding them, no worry, no hurrying home from town when you and the wife and the kids want to stay in to see the movies. How about it?"

Usually this potent argument will be found to be effective. And it will be *most* effective when the farmer has the cash—in the Fall.

You'll obviate the bother, worry and expense of discussing *time* payments, too, in most cases.

SO—

Sell
For
Cash
In
The
Fall!

MIS-SOLD MACHINERY

TRACTORS are sold, over-sold, under-sold and mis-sold. It is of the mis-sold tractor that we wish to speak now. Undoubtedly some tractors are sold to farmers who have no business with them. In the majority of instances, the dealer knows this. But too often he sells them, just the same.

That way of doing business may land a few immediate profits, but in the long run it spells something very like ruin. Unless the dealer can maintain the confidence of the customer, he loses the larger part of his excuse for being in business. The dealer has often been referred to as "the farmer's purchasing agent." As such he must act as professional adviser to the farmer. If he gives bad advice, with too much of an eye out for the "fee" involved, it is easy to see what will soon happen to his reputation.

A dealer of our acquaintance told us recently of an instance wherein he refused point-blank to sell a tractor to a farmer, although the latter thought he needed one. It happened that the farmer's operations were so restricted that the use of a tractor would have handicapped him. The dealer knew this and would not be a party to such a transaction.

As the dealer more than half expected, the farmer went over to a competitor's place and bought a machine. Within a few weeks he came back to Dealer No. 1 and acknowledged that he had been a chump to have bought a tractor at any price. Dealer No. 1 now has all that farmer's trade. The competitor hasn't any sort of a look-in.

EXCESSIVE SERVICE

A MAN who for more than a generation has been connected with the implement business and who knows the conditions in the implement business perhaps as well as does any man in the country, and who has but recently become connected with the tractor business, says there are some tractors on the market upon which it would be impossible for the dealer to make a profit if his commission amounted to as much as 100 per cent. of the selling price. This is because of the excessive amount of service which must be given on these machines to keep them at work.

This too has interest as regards the prevalent commissions on tractors. Many dealers think they are too low. They insist that it is impossible for them to make money selling tractors on 10, 15, 20 per cent. discounts. Doubtless in many instances they are right. Yet it is almost certain that with labor and material costs as high as they are and as they will continue to be for a long time to come, greater commission discounts hardly will be granted to the dealer. What is the remedy?

According to the man just quoted it is dual. Part depends upon the manufacturer, whose duty it shall be to build a tractor so good and dependable that the average service necessary to be given on it shall come well within a fair overhead allowance for service, leaving the dealer enough out of his commission to pay him a fair compensation.

The other part is incumbent upon the dealer. He in turn must disabuse his mind of the idea that he must give unlimited service, limiting such service to the amount legitimately set aside for overhead and charging for all service in excess of that. Sight is not lost of the fact that some service must be given which cannot be charged for, but if the dealer properly understands his job and gives his customers the kind of instruction he should give on operation and maintenance, he easily can cut the amount of free service he is required to give to a minimum—always supposing the tractor he sells is one of those built and sold upon honor and if it has the necessary quality to warrant the dependence placed upon it.

HENRY FORD IN COURT

IN a large number of the daily papers there have appeared editorial comments, some at considerable length, concerning what Henry Ford has said and admitted in the witness box in his suit against the Chicago *Tribune.* No doubt Ford has told enough to make it certain that he is not a keen student of political science nor historical matters.

These articles for the most part are concerned in taking a fall out of Henry Ford, largely because he admitted he did not know at times what he was talking about.

Are there never occasions when the same daily papers discuss subjects in a way well calculated to make the informed reader see they do not know what they are talking about?

Many Canadian editors discuss the problems of the British navy, and many of them have never sniffed salt water.

They pile into long-distance discussions at times of semi-technical matters in a way that shows how barren they are of even the fundamentals of their subject.

Why not take Henry Ford in his own back yard, namely, as a manufacturer and an organizing genius?

Why not take him as an employer who long ago put in a $5 per day wage, then a $6 and $7?

It is somewhat of a knot-hole vision to size up a successful man entirely on a matter and in a field where he is admittedly not a specialist.

SOUND ADVICE

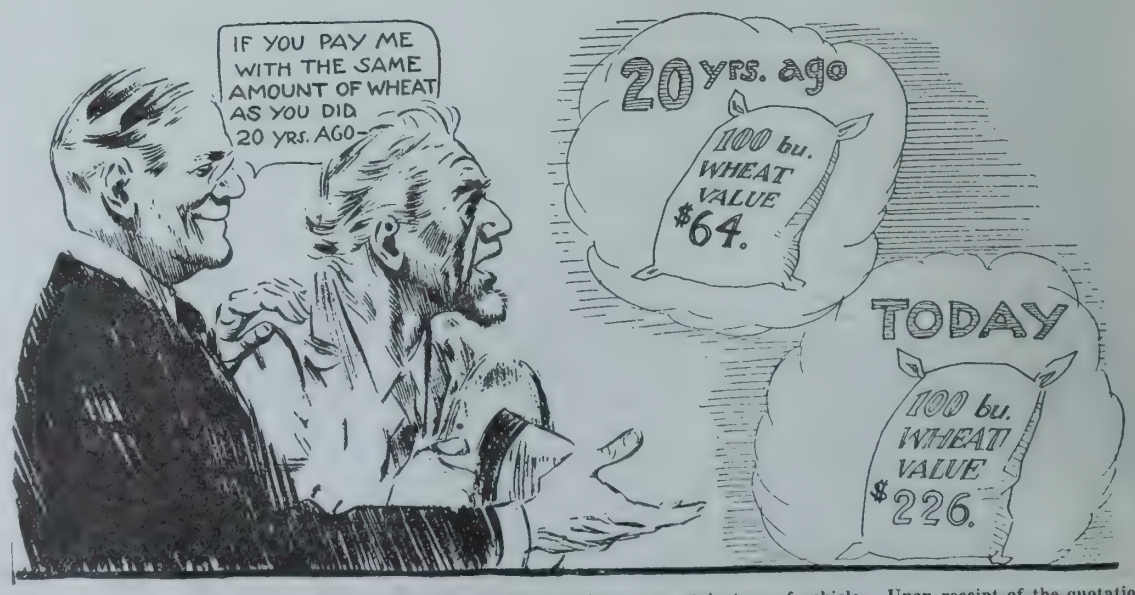
FOR years we have had "free air." Yet air can be sold. It costs money to make it, so why not SELL it? Garages and service stations can get coin-in-the-slot machines which any desirable customer is glad to patronize.

And sell water. Why not? It is WORK to fill a radiator, and somebody has to pay for the work.

And distilled water! How many garages sell it? In fact, how many have it at all? Yet customers pay money for it in drug stores—and are glad to get it.

All these countless little revenue collectors make big profits. And, more important yet, they check the leaks that take the profits of the bigger departments.

While getting the seldom dollar get the often penny too.—*Motor World.*



A short time ago a farmer asked a buggy manufacturer for a price on a certain type of vehicle. Upon receipt of the quotation the farmer wrote the manufacturer accusing him of "profiteering" and similar high commercial crimes and misdemeanors. In justification of his charges he reminded the manufacturer that he (the farmer) had once bought a very similar buggy from the same factory at a price far and away below the price now quoted. This particular manufacturer operates one of the systematic business concerns that maintains a record of all its transactions. Upon receipt of the farmer's letter of complaint the manufacturer looked up the previous sale to which the farmer referred. He found that such a sale had been made as the farmer stated and that the farmer had paid for that buggy not in money, but with a shipment of wheat. The manufacturer thereupon replied to the farmer giving the complete record of the transaction and said: "If you will ship me for your new buggy the same amount of wheat you shipped for your old one I will gladly ship the buggy and in addition will ship you a piece of household furniture and a good kitchen stove!"

Rosenheim Buys a Car "As is"

Pinched (With Permission) From "Timken Magazine."

Sketches by CLYDE E. DARR

"I TELL you, Meyer," said Max Rosenheim, proprietor of the Scotch Woollen Mills, High-grade Men's and Boys' Clothing, "prices of ottermobeels is outraggus and if them suckers they get list prices they ask, all I say is I wish I could trade it the store for stock in a company makin' over five thousand cars a year. Rachel she has gone with Abie and Rebecca for a week now visitin' her sister, and she says to me to buy a new car and have it in the garridge when she gets back, but when I look them over, the prices they ask sound like a stock gambler's idee of a perfeck day in Wall Street."

"Well, Max," said Meyer Goldman, "ottermobeels they aint exactly like clothing or food, you know; you don't have to buy 'em. While mebbe they aint luxeries any more, you can't call 'em now real necessities."

"When a man has a wife like my Rachel, and she says get an ottermobeel right away, it becomes a necessity. I believe if I could pick me up a good second-hand car, Rachel she wouldn't know the difference. A sucker a man is to pay say two thousand dollars for a car, when mebbe right around the corner is a feller what has to sell his machine sudden at a bargain. Rachel says she is ashamed to be seen in the car what we have, but I bet if I have one that is no better, only different, she brag over it like it was a pet. Come on, Meyer, go to lunch with me over to Sol Epstein's where to-day he has *kalbfleisch* and noodle soup."

"Listen, Meyer, to what that feller is sayin'; it is just as I told you," said Max, while waiting for their order.

"It's the best used car buy that was ever offered," the man at the next table was saying. "There's a boat that has been run only eight thousand miles, with five good tires, battery in perfect condition, gears better than new, and a coat of fresh paint that has just dried. Look her over there at the curb. And the man that hands me three hundred and fifty buys her as is and drives her away."

"Meyer," whispered Max, "he means that swell lookin' car with the yellow body out there. This lunch it can wait. Come on, they are going out to look it over. Buy that car I will if the feller he aint kidding."

Max and Meyer hurried to the sidewalk where three or four prospective purchasers were looking at the car.

"I wouldn't think of sacrificing it, but my sister is

"Listen, Meyer, to what that feller is sayin'."

sick out in Iowa, and I gotta get there right away. Must start to-night."

"Any objeckshuns you got to have an expert look at it?" asked Rosenheim. "Me I know a lot about ottermobeels, but when I buy I want to be sure."

"Go as far as you like," said the owner.

"There is the feller I want now," said Max, pointing to a young man on the other side of the street. "Hey, Isadore, come here and tell me something. Now, Isadore, look it the car over and give to me your honest opinyun."

Isadore gravely nodded his head, then proceeded to give the car a thorough inspection. Raising the hood he swiftly scrutinized the engine. Telling the owner to get in, he said: "Now, you start the engine on low and shift to second."

Isadore bent under the rear of the car, both hands grasping the tapered axle housing, his ear pressed against the centre. The car moved slowly forward, then leaped, dragging Isadore twenty feet before he released his hold and sprawled face down in the road. Rosenheim rushed forward and helped him up.

"Never mind the clothes, Izzy; I repair 'em and press 'em free of charge. Is the car all right?"

"Max," said Isadore, dabbing his handkerchief on his nose to check the flow of blood, "that feller is a lowlifer what I don't like at all. I wanted to see if the gears made a noise, and the fresh guy he starts off like he wants to get the jump on somebody in a five hundred mile race. But, Max," whispered Isadore, "anywhere up to eight hunnerd dollars that car a bargain is."

"Now, Isadore, look it the car over."

"Well, what do you think of her?" inquired the man, after he had backed the car up to the group. "At three seventy-five it is like giving the car away, and if my sister wasn't——"

"Is it you have raised the price?" inquired Max. "First you say it is three fifty."

"Did I? Oh, well, what's twenty-five bucks when a feller's sister is dyin' 'way out in Iowa. Take the boat for three fifty."

"Come into the bank and I make you out a check," said Rosenheim, and in ten minutes the deal was completed.

"Now, Isadore, you drive the car around awhile, as Meyer and me, we want to eat our lunch. Bring it over in front of the store in an hour or so. Meyer," as they applied themselves to the neglected lunch, "you see what it is to be a keen business man. Me, I got what is practically a new car, and Rachel she never knows the difference."

About three o'clock Rosenheim concluded to drive the car home, intending to bring the old machine up town and make arrangements for its sale. Stopping in front of the garage door he reached in his pocket for the bunch of keys, when he noticed that the padlock had been twisted off. Opening the door, only a vacant space greeted him where his old car should have been.

"So," said Rosenheim, "thievers have been here while Rachel was away and now that Herman Feldman, he will have to pay me full insurance. Right away I drive down and make it my claim."

Stopping his new car in front of an office building, Rosenheim took the elevator for an upper floor where Herman Feldman conducted his insurance agency.

"Well, Herman," said Max, "bad news I have for your company. Rachel and the children have been away from home, and while I am living down town, thievers broke in and steal my ottermobeel, and now I ask you as an honest man to pay me on my polercy."

"All right, Max, we will go down to the police station and report the theft. We take your policy down and leave them the description of the car. If we do not get it the machine in a week, then you draw the money what we honestly owe."

"Max Rosenheim," said Herman, as Max motioned him to get into the yellow car, "is it a joke you are playing, or do you think you can make it a monkey of my company by painting your blue car yellow and telling me thievers have stole it?"

"Never mind the clothes, Isadore; I repair and press 'em free."

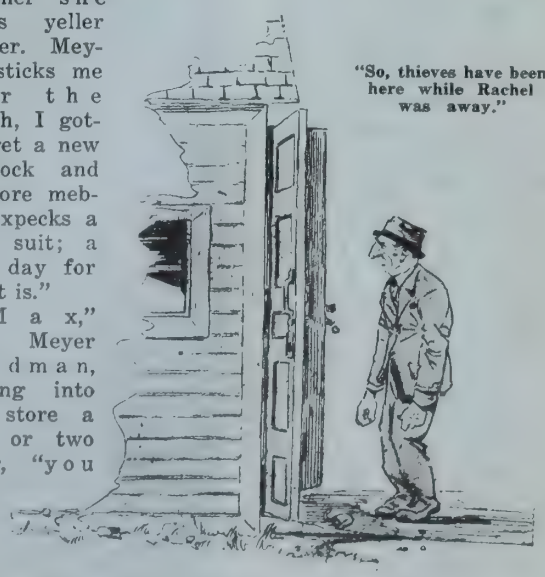
"No, no, Herman. This aint a joke, it's seerus. This car I buy at a bargain from a feller what had to hurry to his sick sister in Iowa."

"I guess that feller's gone to Iowa all right or farther. How did it come, Max, that the thievers what took your car leave the license plates so handy to put on a new one. See here in your polercy. License number 37589, and that is what you have on this car."

"Now, aint that what you call a quincidence," said Max, scratching his head as he looked at the plate.

"No, it aint any quincidence; State license fellers don't make them quincidence mistakes. Look here at your engine number in the polercy, 4569, and here it is on the engine. If it is that you bought this buss *again*, then a slick thiever stole your car, painted it yellow and picked you out as the easy mark to buy it. You got no claim against my company. We admit your car was stole, but you recovered it yourself without notifying us prior to finding it, so's far as we're concerned it aint ever been out of your possession."

"Oi, oi," said Rosenheim ruefully, "three hundred and fifty dollars I pay for a job of painting what would be dear at seventy-five, and I don't believe Rachel she likes yeller either. Meyer sticks me for the lunch, I gotta get a new padlock and Isadore mebbe expecks a new suit; a bad day for me it is."



"So, thieves have been here while Rachel was away."

"Max," said Meyer Goldman, coming into the store a day or two later, "you was sayin' somethin' about gettin' a new car. I see Simon Ehrlich has got them 1919 models in. Let's go down and see 'em."

"No, Meyer," said Max, "I aint interested. When a feller buys the same car twice, he feels quite a lot of affeckshun for it."

Make Your Shop 100 per cent. Efficient

By SHIRLEY WARE

THERE is, perhaps, no greater playground for the man with ideas than the automobile industry and no part of it, from accessories to the custom body built car, is fenced in by lack of opportunity. The many different devices and equipments to be found to-day within the factory, display room, repair department and garage prove that while the automobile itself—particularly the passenger car, although the truck and tractor must not be forgotten—has been undergoing many changes in style of body, more accurate mechanism and a remarkably complete refinement of its interior, the powers behind these improvements have known their share of progress also. Workmanship has been made more efficient by the new systems and conveniences employed; a wide scope of competition has compelled a more careful selection of materials, and the natural increase in business, thereby, has demanded quantity production. So it is, the children of industry and commerce depend upon such fundamental units for their unstinted maturity.

Racks for drying the various parts after they are painted are a practical convenience. All the racks are equipped with rollers which allow them to be moved about to any place desired.

There is much to be said relative to conducting and building up a successful business, but whether it be the country town grocery store or a large manufacturing plant, that business must advance with the trend of the times, or ahead of it, in order to become a recognized one. The small town grocer will learn that unless he places new goods upon his shelves, his trade will seek that which they have come to know through the silent-speaking salesman—Advertising—at his competitor's place of business. By stocking his store with new, reliable goods, the merchandise will be disposed of, but this is not his only problem. The merchant, or dealer, or in fact any business man, must handle his goods in such a manner as to obtain maximum value for the time spent in turning them over.

Customers may crowd into his store because he carries the desired stock but unless he knows where to immediately locate the articles called for, he cannot hope to serve them promptly. If he must move a barrel of apples to find a sack of salt, or spend a great deal of time in search of the goods on his shelves, he is lessening the per cent. of his profits thereby, as well as imposing upon the time of his patrons. And if not one customer, becoming impatient, leaves his store, it is not only a point lost in efficiency but a most dangerous seed has been planted against him—that of dissatisfaction, and this seed will sprout, by the care and attention of his competitor, into a sturdy plant of habit—the custom of trading at the other fellow's place of business.

SO, he must arrange his stock with an idea of *system* in mind, placing the goods that he has fewer calls for upon the top shelves, giving stock orders at the right time and collecting outstanding accounts systematically in order to lessen the demands upon his time and permit him to do a bigger business, in consequence.

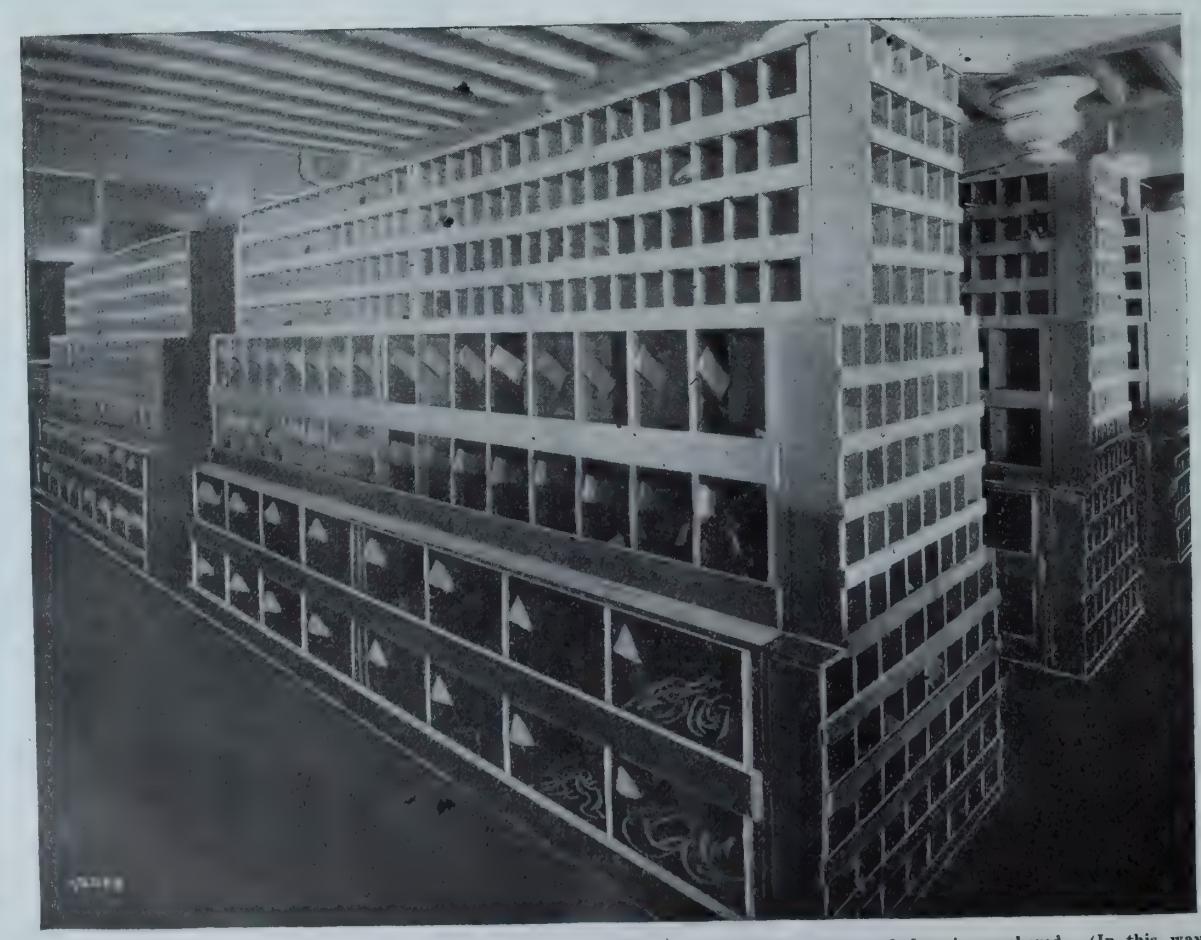
What applies to the grocer applies to both dealer and manufacturer and the larger the company the more problems it has to solve. The manner in which some of our automobile plants are today taking care of these perplexities is indeed interesting. One Company in the States—the Nordyke-Marmon Co., of Indianapolis, Indiana, was recently confronted with the difficulty of too little space. The business had outgrown its bounds, bulging the factory walls to a dangerous break. It became obvious that an addition was a bare necessity, for more workmen are needed and equipment for their operation must be installed. The factory was located about two miles from the city proper, and, as is the custom among automobile manufacturers, a display room was maintained in the down-town district for the purpose of exhibiting show models.

The executives of the Company spent much time to solve the problem most satisfactorily and the final decision was to build a branch factory in the down-town automobile row, combining display rooms and repair department, for, as they concluded, motorists would prefer a more centrally located plant to repair their machines from the outlying factory offered. Accordingly, therefore, the new branch factory was built and so many new time and labor saving features are to be found there that wide attention is being drawn not only from those interested in the automobile industry but men representing businesses entirely foreign to such.

A. B. Wagner, the Manager of the new Local Branch, is the man behind the bulk of these ideas. He is a man who has formed the valuable habit of observing the other fellow's methods, bringing them into his own business and making them serve his purpose. The Repair Department demonstrates best, perhaps, the many ideas that have been adopted, but the other departments have their share also.

THE location of the Plant is ideal, being on a corner of one of the most popular drives of the city and the display rooms, one for new and one for used cars, enjoy an abundance of window space. Indirect lighting system is used in the display rooms and adjustable reflectors of strong candle power are placed at corners where the light reflects upon those parts of the car to be featured. Immediately adjoining this display room is one for used cars and the care that is taken to show these cars to best advantage is to be commended, for, the finish of the room itself, the spaciousness and cleanliness, permit the visitor to view the used car from all sides and judge it individually instead of by comparison with the car that is crowded alongside in a most "junk-pile" appearing exhibit. Executives' offices are located on the first floor; an entrance is provided. When a car is brought into the factory for repairs, it is first driven into a room with concrete floor (in fact the floors throughout are of concrete) and cleaned thoroughly with a shower spray that is secured to the ceiling. A separate rubber tubing is attached to this device also, to take care of those parts such as wheels and fenders that need a stronger force to clean them. The car is then backed upon the freight elevator and carried to the second floor, which comprises the repair department.

Here it is examined and if found to be in serious trouble, the motor is disassembled and placed upon a turn-table that allows it to be handled with equal advantage from all sides. The parts of the motor are placed upon "motor ambulances" in order to avoid loss of same or confusing them with other parts from disassembled motors. Anyone who has been a guest at a hospital, booked for an operation, will recognize these methods as that institution's procedure. The interior of the car is relieved of its removable fittings and personal effects, such as carpets, seats, clocks, etc. These are placed in an individual chest and sealed with a lead seal that is very similar to the freight car seal. The wheels and tires are stored away in a like manner if the car is to remain in the factory for any length of time. A tag bearing the owner's name, number of car and other necessary information, is used in sealing and the owner is given a duplicate.



Tiers upon tiers of boxes are used to house the regular parts. Each tier is lettered and each box is numbered. (In this way everything is where you want it when you want it.)

OTHER ideas that are adaptations from the modern hospital are the provisions for keeping the doors throughout from showing finger prints. A design is painted upon all the doors in black paint wherever the hands come in contact with the door frames; in order to keep the wash basins in a presentable appearance, they are equipped to operate with foot valves; like the hospital chart that gives an hourly record of the patient's temperature, pulse, etc., a bulletin board is to be found in the office of the service manager. This board contains an up-to-the-job record of the progress of each car coming in for repair, and when anyone in attendance of the office receives a telephone call for information regarding his machine, all that is necessary is a glance at the blackboard. A similar record is kept of the batteries in service.

There are tiers of boxes for the repair parts. Each tier is lettered alphabetically and each bin is numbered according to

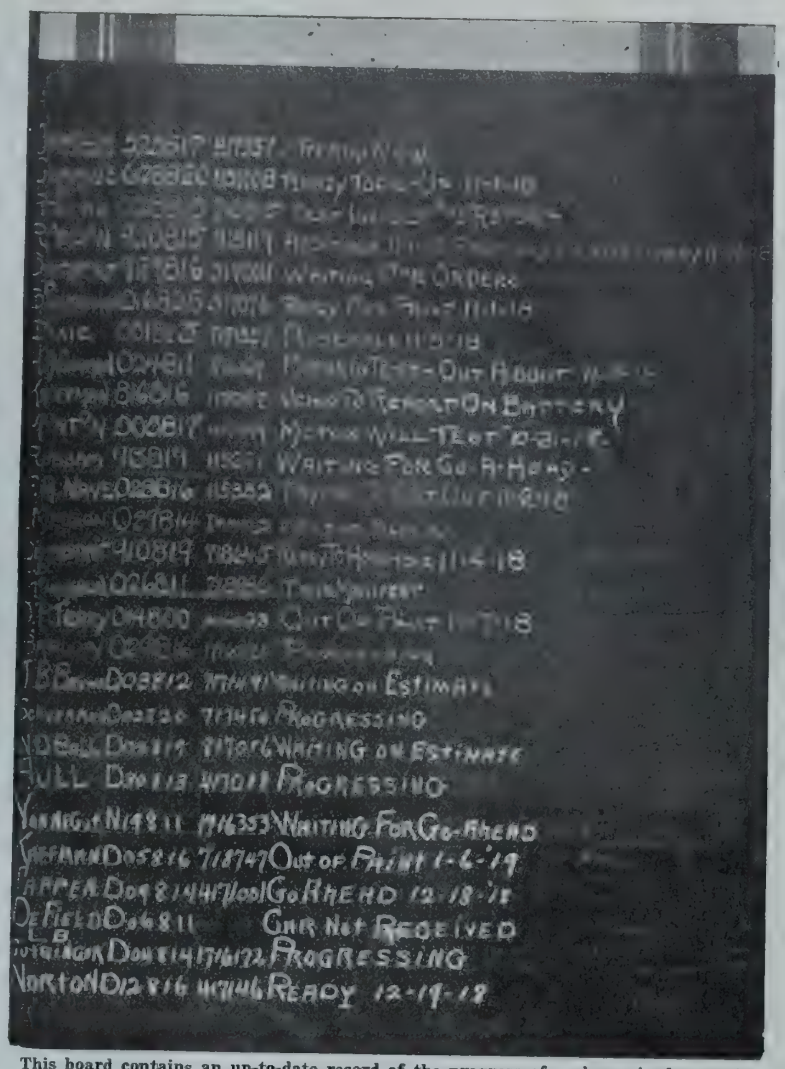
An office filing cabinet suggested this method of storing incandescent lamp bulbs.

row and section. Any workman in the shop is able, with the assistance of a card index system, to locate the part desired with no difficulty. This is recognized as a system employed by the department stores for stocking their goods.

In order to keep important tools in place, pyramid tool racks have been built. These are painted gray, as is the interior of the entire factory, and an outline of each tool hung upon the racks appears in bright red paint. At the end of the day when they are being checked up, a glance at the board will reveal just which tools are missing. Gaskets are filed in large drawers provided for the purposes and they are secured by nails driven so as to fit into the holes of the gaskets. Paint drying racks support the different parts of the automobile, such as hood, fenders, wheels, etc., and by placing these on the shelves of the racks, after painted, considerable floor space is saved. They may also be covered with cloth to keep dust from settling upon the surface.

A CABINET, similar to the filing cabinet, is found useful for a stock of incandescent lamp bulbs. The advantage of such a cabinet may easily be seen as it accommodates a large-sized stock of various lamps for 1913 to present day models, and having partitions midway in each drawer with holes large enough to hold the end of the bulbs, the usual large percentage of breakage is eliminated, nor is the workman compelled to visit the storeroom each time the different bulbs are needed.

Among the many other things supplied to make the interior a fit place to work in are scrap boxes to store waste. These are made with two hinged doors, making quick dumping possible, and the other for securing the waste material as needed. The oil barrel that is unsightly wherever seen has been hidden under a box built to cover. The barrel is mounted upon a platform on wheels.



This board contains an up-to-date record of the progress of each car in for repair. A similar record is kept of batteries in service.

A Tractor Romance

By FENTON J. SPAULDING

Both Jones and Smith were tractor men;
Each thought the other blind.
Smith sold the Form-a-Tractor type,
And Jones the other kind.

Now both these men loved Mary Blake,
Each woo'd her on the sly;
Jones tried by spending lots of dough,
To thus a tractor eye.

Smith had a very handsome shape,
It was his only factor;
And so he took her to the beach
To let his form-a-tractor.

But neither of them ever could
Ex tractor real consent;
And so the rivals tractor still,
Till death dis tractor sent.

Let Farmer Grip Wheel:

He feels tractor's tremendous power! He Senses the thrill of machinery! He smiles the delight that he feels!

Next Time He Perspires Behind the Labored Plow Team He is "Sold" on Tractors

H. J. Macdonald, the enterprising implement dealer, sitting at the wheel of the tractor which he took into the country for demonstrating purposes this spring, resulting in the placing of several orders.

By E. H. SCOTT

"How do you sell tractors?"

Ask this question of the implement dealers in fifty towns and a large percentage will respond with the stereotyped answer that they simply keep them in stock, and when the farmer comes in to make his enquiry they strive to sell him.

The idea does not seem to enter the minds of some dealers that the tractor is yet an untried experiment to most farmers, and they are reluctant to take the chance of laying out from $1,000 to $3,000, when they can get along *moderately well* with the old-fashioned four-horse team.

It was refreshing and inspiring to run across a dealer at Melville, Sask., who has adopted live methods of securing prospects and selling them. This man is H. J. Macdonald, who operates a combination garage and implement warehouse. He has sold half a dozen Wallis tractors this spring, at $1,950 a piece, by going out onto the farms with his machine and giving such a demonstration of speed and efficiency as to entirely put to rout all the fears and doubts of the cautious, hard-headed agriculturists. For these demonstrations he telephones every farmer in the vicinity, inviting him to be present. The farmer on whose land the demonstration takes place has five or six acres plowed up for nothing, and in return shows no reluctance in entertaining the entire party.

MR. MACDONALD makes a point *of letting the farmers take turns in operating the tractor and plows themselves in order to impress them with the simplicity of operation.* He employed an engineer for two or three weeks at the most opportune time of the season to conduct the demonstrations, and incidentally he appears on the scene personally driving a brand new Gray-Dort car, for which he is agent. He has sold several of these cars through prospects obtained in this way.

"I have a two-ton Dominion truck," said Mr. Macdonald, "and I load the tractor onto this to take it to the scene of the demonstration. By the use of a couple of planks the tractor climbs on board by its own power, and is unloaded in the same way. Then I attach my gang plows to the rear of the truck and tow them out. All told we gave demonstrations on fifteen farms, most of them about twenty-five miles northwest or southwest of Melville. It was expensive, but it was certainly worth while, for not only have I sold half a dozen tractors, but on every farm where one of these was placed *a constant demonstration is going on, and the farmers in the vicinity are becoming educated to the tractor idea.*

"By using a truck we could run out to a farm in very short order, and by advertising the demonstration through the newspaper and over the telephone we usually had an audience of from six to ten farmers, most of whom left their spring work to be present. This alone was evidence of their interest. At times, when unusual interest was displayed, we have stayed two days at one place, in which case I would take my touring car and scour the country for farmers, bringing back with me all that the car could hold. We did not make a single sale at any of the demonstrations. In every instance they came to the office later and made their purchases. I have found that it does not pay to push a farmer too strongly to buy.

"In every case where a demonstration was made I took the names of all farmers present, and these names were added to a mailing system which I have adopted. I keep them constantly 'fed' once a month with new literature, so that the memory of what they have seen is not allowed to die. This literature is supplied by the factory, and is of the highest class, beautifully lithographed and setting forth the fine points of the tractor in a way that no country dealer could emulate.

"I have noticed that some farmers have attended two or three of these demonstrations in succession. These were marked as men who were intensely and vitally interested, and in each of these cases I have given them special attention. The surest way of getting a farmer interested is *to let him get on the tractor and drive it himself. In this way he gets the personal feel of it; he grasps the meaning of the tremendous power behind the driving wheels; he senses the wonderful thrill of plowing by machinery; and the smile he wears reveals the delight he feels. Later on when he is walking along behind the labored plow team it all comes back to him.*"

Mr. Macdonald uses a very effective advertisement in the local paper, in which a cut of the tractor supplied by the manufacturer is the outstanding feature. The advertisement opens with the announcement that "The Wallis won the title, 'America's Foremost Tractor' by ending needless power waste." Curiosity is aroused to find out in what way this was achieved, and this is satisfied by the balance of the advertisement setting forth the qualifications of this machine.

This is the first season that Mr. Macdonald has handled this tractor. He handles also the "Happy Farmer," which he demonstrates on the farms, and which took first prize at a recent plowing match.

Manufacturer, Dealer and Farmer Must Co-operate to Give Tractor Service

The manufacturer can improve tractor service by:

1. Supporting and supplementing the dealer's parts service by maintaining a prompt 100 per cent. parts service from factory and branches.

2. Supplying parts without hesitation to whoever orders them, on the principle that parts are ordered only to keep machines in service.

3. Building into his product better lubrication, dirt protection, renewability and accessibility.

4. Continuing to advance in the use of alloy steels, anti-friction bearings and close limits as to accuracy.

5. Carrying on consumer education through constructive advertising and through the dealer.

6. Improving instruction books, with particular attention to organization and indexing of material and to impressiveness and durability of books themselves.

7. Maintaining a factory service department to develop efficient service methods, to facilitate contact of engineering staff with field conditions and to co-operate with dealers.

8. Handling persistent or baffling cases of field trouble which do not yield to the dealer's efforts.

9. Marketing his product only through dealers who can and will maintain adequate service.

10. Requiring dealers to follow certain broad and well-established principles in sales and service methods.

The dealer can improve tractor service by:

1. Grasping the proposition that the tractor is a satisfying source of farm power only when it is backed up by service that makes good not only the faults of the machine but also those of the operator.

2. Carrying in stock almost every part that is likely to fail, whether from accident, neglect or normal wear, so that "waiting for parts" may be almost unknown.

3. Taking care that the man who sells and the man who serves are fitted by temperament and training to deliver the farmer what he needs.

4. Providing motor transportation and special testing and assembly tools for his service force.

5. Helping the farmer with troubles that develop in the field.

6. Maintaining facilities for competent and economical repair and overhaul jobs.

7. Selling the customer the "knowhow" of operation and care, and keeping him so thoroughly sold that he will not become indifferent.

8. Selecting lines and offering machines best suited to his patron's needs.

9. Supporting the service plans of the manufacturer.

10. Making use of the rental unit as a service short-cut—cutting investment in parts and cost of giving service; cutting down tractor shut-downs and sales resistance.

The farmer can improve tractor service by:

1. Knowing what service to expect and from whom to expect it.

2. Understanding that service costs money, and that in the long run the man that gets it always pays for it.

3. Knowing the principles according to which all tractors must operate, also special features of his own machine.

4. Accepting the manufacturer's instruction book as authority on all points concerning his tractor, and referring constantly to that authority.

5. Familiarizing himself with the construction of every part of his tractor and with its proper functioning.

6. Seeing that his tractor constantly receives intelligent handling and care.

7. Ordering repairs known to be needed long enough in advance to allow for delays in transportation or in shipment due to shortage of stock.

8. Ordering repairs with such accuracy that orders will not be held up for additional information, nor wrong items shipped.

9. Keeping on hand extra parts of which the cost is small as compared with risk of loss or breakage, also parts certain to be needed sooner or later as a result of wear.

10. Using the same judgment in loading the tractor as in loading animal power. Steel cannot feel but a bank account can.

Tractor Breaks Into Nova Scotia—and Makes Good!

By M. CUMMING, B.A., B.S.A.

Secretary for Agriculture, Principal College of Agriculture, Truro, Nova Scotia

THERE are in operation on the farms of Nova Scotia, according to our information, somewhere between 50 and 75 tractors. These are mainly tractors of the 8-16, 9-18, and 10-20 powers. The individual makes which have so far been most largely placed in the province are the Fordson, the Case, the I. H. C. 8-16, the Cleveland and the Happy Farmer. There may be others of which we have not been advised.

Apart from the fact that field conditions are mostly suitable to light farm tractors of about the powers mentioned in the foregoing it should be added that the light tractor is relatively more serviceable for stationary engine work in Nova Scotia than in other parts of Canada, for threshers and other power machinery used in the province are mainly of such sizes that practically any of the tractors mentioned are of ample power to operate them.

It is our own belief that on the larger farms of the province the tractor has already become a most valuable implement and will become more and more indispensable as the years go by, provided first and always that the owner or his employee are mechanically inclined. Just how large a farm justifies the necessary outlay for a tractor we have not yet made up our mind. Something of course depends upon how much stationary engine work may be done. In general, we have come to the conclusion that the owner of a tractor, who expects reasonable returns from his investment, should operate it for some purpose or other at least 60 days in the year. There may, however, be farm conditions, such as those described in the next following paragraph, under which a tractor may be profitably used even for a lesser number of days per year.

ONE of the great drawbacks to farming in Nova Scotia is the lateness of the spring season, which often delays seeding so much that it is impossible to get a large crop in the ground before the summer has commenced. For this reason, the good Nova Scotia farmer has to work to limit capacity during the seeding season. This is a condition under which a tractor may render invaluable service, making it possible not only to prepare the land for seeding more quickly and thus gain time but also making it possible, where desirable, to put in a much larger crop than could otherwise be attempted. On the College Farm last year, we were able by the use of a tractor to put in 30 acres extra crop, an amount of work which we could not have undertaken with our usual horse and man power. An almost equal value attaches to the use of the tractor for fall plowing, which is often difficult to work in under conditions of late harvests which usually prevail in Nova Scotia.

There have come under our own personal observation some operators who have been continuously successful with their tractors but others who, almost from the very first, have met with difficulties of various kinds which have hampered their operations. Lack of mechanical skill or carelessness were generally the contributing causes. In course of time these causes of failure should be overcome. Carelessness is the most difficult one to contend with. The lack of mechanical skill is being gradually overcome with the increased adoption of all kinds of machinery.

ON cases when there is a large amount of work to be done it will pay, even at considerably above ordinary wages, to hire the services of an expert tractor operator. He will save enough time in the course of a season to more than pay his increased wages and besides he will save much wearing of machinery and so reduce depreciation costs. There are men of this class who will be quite willing to work at other kinds of farm work on days when the tractor cannot be used and whose services will often prove of great value in putting other kinds of machinery into working shape.

The adoption of one machine for the whole province would be of great advantage so far as obtaining supply parts and the making of repairs is concerned. But this seems impracticable. Perhaps it is equally impracticable to standardize the working parts of the various machines. Certainly, if this could be done, one of the biggest objections to the use of a tractor would be solved. Barring that solution, it is important that parties, who contemplate purchasing tractors, should only purchase from companies who have made arrangements to place ample repair parts at easily accessible centres and who can guarantee trained men who can make repairs and put machines to rights at short notice. All companies are attempting to do this but the comparatively small number of sales to date have made it impracticable to provide as efficient service as should be available. As sales increase, these facilities should be improved. Any companies that are not prepared to offer the best of facilities along these lines should not attempt to do business.

THERE are now enough tractors being operated in Nova Scotia to provide sources of information for prospective purchasers. If a fair number of the present operators are successful, there is no question as to the future of the tractor. If they fail, no amount of writing or talking will bring about any substantial further sale of tractors. For this reason, if for no other, the selling agents of any one tractor should be interested in the successful operation of all makes of tractors, for the failure of one tractor, no matter of what make, is a blow to all tractors.

Our own personal advice to farmers who inquire of us in respect to the purchase of a tractor is to tell them to spend a day or more with a successful operator of one and let the results of their observation be their main guide in respect to a contemplated purchase.

Prof. Cumming Says:

"We have had a very satisfactory experience in the use of the tractor for breaking up rough land. I am sending you a little snapshot of the tractor working in a field which was filled up with small birches, laurel and blueberry bushes, very hilly and uneven. This kind of land is difficult to break up and one that requires lots of power. It occurred to us to try the tractor hitched to a Western breaking plow. The experiment proved most successful. Never have I seen such rough land so well broken, and the land was so rough that we thought the tractor could hardly move over it.

"While I would not think that a farmer could buy a tractor for the purpose of breaking land, yet if he has it, he will find it a great help in cases such as I have described."

Keep Your Shop Alive

By F. H. SWEET

NEXT to your trade paper, the jobber's salesman who calls on you can be the most profitable asset to your accessory department. Manufacturers have taken a great deal of pains to keep him posted on the selling points of the various lines he carries. You ought to get this information and make it work for you.

Get the selling points he has and use them on your customers. Of course it is possible for you to work these out for yourself, but that is a slow way, and what's the use when you can get them ready-made for the asking.

If you handle a certain make of horn, or vulcanizer, or battery, learn why it is the best of its kind. One way to find out how limited your information on any article is, is to try to tell somebody else about it. And when you find out that your information is limited on any of the accessories you handle, ask the salesman what talking points other dealers are using to make the goods move. If he can't tell you, then is the time to begin to wonder why you have that particular line in stock.

There is no profit in goods until they are sold. No merchant wants to see his stock lie on the shelf for weeks or months without moving. If stock doesn't move as you had anticipated when you bought it, try to find out the reason. The chances are ten to one that the fault will be in the merchandise itself. Possibly your customers don't even know you have it, or if they have happened to see it in your window, they haven't realized that it is something which applies to them all.

POSSIBLY the fault is with the size of your stock. If you only carry a small stock and are always out of some items, you will find that your customers will soon get out of the habit of asking you for accessories. If your gasoline tank stood empty for a month and all your customers knew it, how long would it be before you stopped getting calls for gasoline?

Yet there are accessories that are almost as necessary to a motorist as gasoline if you will only let the motorists in your community know it. Keep such goods in stock always, and keep them in sight where you and your help will always be reminded to sell them even if a customer doesn't ask for them. A customer who has had the experience of being sold on some item that he had not thought of asking for, cannot help getting the impression that the place where that experience was obtained is the place to buy the accessories he knows he needs.

Ask your jobber's salesman what items his other dealers are selling and how they do it. You will get honest advice because the salesman wants your trade next year and the year after. Don't wait until he pounds you on the back and forces you to stock something new. You are the one who ought to be most interested in the profits in the live things that are constantly coming on the market, and for the good of your business you ought to be constantly on the lookout for accessories that will look good to your customers.

The first, last and only reason for running an accessory department is to make money. Unless you treat your department as a real part of your business and not as a sideline that will take care of itself you are likely to find at the end of the year that it is running at a loss.

Follow the methods used by successful merchants in other lines, but keep your stock well assorted, and if any particular thing seems to be falling behind the others, find out quickly what is the cause, and give it an extra push. You may find that it is really one of the best sellers if it has a fair chance.

Knowledge of Business Firmest *Foundation*

By A. M. GLOVER

I STARTED up nine years ago with just the kit of tools I had as a journeyman repairman for the old Russell Motor Car Co. when they were making the Russell cars. I had had considerable experience in England, having severed my apprenticeship with English motor car firms and thus, to start with, I had the basic advantage of "knowing my trade." This I consider essential; it is useless to hope for success in any line in which you have not mastered the details—that is, of course, if it is a small place that the owner is going to run "off his own bat" until it grows.

I suppose if one can afford to open up in a big way and hire the necessary skilled help he might get along. However, it seems to me that a business owned by a man who understands it himself is on the firmest foundation.

Therefore, this is the very first rule I would lay down to anyone contemplating going into business; be sure you "know" the business, and if you don't, put off the opening until you have learned it, even if it means a considerable delay.

I found that the fact I was a qualified tradesman soon circulated and business began to come my way. During my last few years at school I had taken up bookkeeping, shorthand and typewriting, more as a filler than anything else, but now I found that being able to open and keep books properly myself was a considerable help. True, I didn't have much of it to do for the first year or two, for I simply had not the capital to carry accounts, hence the big "cash" sign I painted right across the barn, during the later years I have become well acquainted with the standing of my customers and by using this knowledge in granting credit do not lose $50 a year on bad debts. I make it a rule to mail all accounts, in detail, the beginning of every month and I make drafts on out-of-town customers as soon as overdue and go and see in-town people *MYSELF*. I never delegate collections to another. I have found that making collections requires a different kind of tact to that which the average boy working around the shop displays, and I also find that if a customer is holding back payment through something that does not satisfy him, I usually can mend the trouble one way or another, before he has time to go around kicking to other people.

WHILE on the question of dissatisfied customers, I would say I have found that the best money I ever invested was in promptly returning a man the price paid for goods when he claimed they were not satisfactory. Nine times out of ten when you do this he will start and talk about them and you will find out that it was not the goods but the way he used them that was wrong. Then you have a chance to show him where his mistake was and still not have him feel that you don't want to return his money. After he has heard where he is wrong, it is an easy matter to get his money again and send him away feeling that you are "a pretty decent fellow after all."

As I got established I added various lines of accessories and did take up an agency or two for cars but as these took more money to handle than I could produce I dropped them about three years ago and devoted myself entirely to giving service on every make of automobile, gasoline engine, tractor and marine engines. This gave me a free hand and people grasped the idea at once—that I was not interested in any particular make of goods and was just as interested in seeing their machine go right as the other fellow's. When I held an agency they seemed to think machines of that make would get preferential treatment.

After coming to this decision, the logical sequence was that I should put into stock all the spare parts most likely to be called for and sufficient tools to take care of the work.

I installed a gasoline engine of 6 h.p., belted to line shafting, and from this drove an air compressor for pumping automobile tires, with a big hot water tank as a reservoir, for this was also useful for cleaning purposes. A drill for all kinds of small drilling, a grinder and buffer were also added. I should have installed a lathe, but I get lathe work done at one of the local factories up to the present. However, a good, accurate lathe is really a necessity to a repair shop. It should swing at least 18 inches over the bed. I don't care for a gap lathe as my experience has been that they are not rigid. I may add I have a track with traveling hoist so that I pick up heavy pieces of machines and carry them to any place in the shop to work on. I find this a very great labor-saver. It costs so little I certainly would recommend its installation to anyone fitting out a shop. I have two cement-lined pits for underneath work, but do not often use them as I prefer to lift up the car with the hoist and get at it that way.

This shows the East St. Garage, Goderich, which has a good strategic location next to the Town Hall. Standing in the doorway, from left to right, are Reg. Williams, Walter Ross and A. M. Glover. Water, gas and oil supplies are conveniently located just inside the front door. Outside, on the right, stands a grease pump. An electric light illustrates the sign at night. The garage seems somewhat dwarfed by the Town Hall, but is 30 feet wide and 70 feet deep.

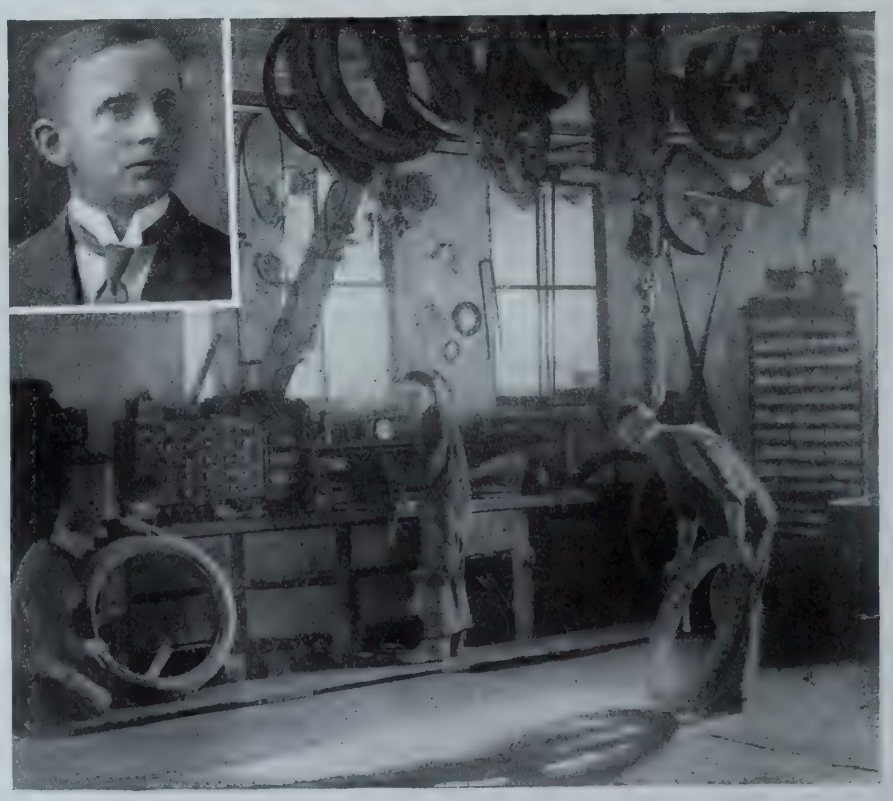
In order to take care of the host of small parts, nuts and bolts, etc., I got the local cigar stores to save me their cigar boxes and then had a set of shelves made into which they would just nicely slide. I found this much better than bins, as I can take out the compartment and look over its contents on the bench. A bin generally collects a lot of dirt in the bottom, making it hard to find some small parts. If I used bins, the fronts would be removable so that I could clean them out and sweep all the dirt away.

When wiring the place I had electric light sockets put at intervals around the shop so that it was at no time necessary to take a lamp out in order to attach the extension lamp. The slight expense was more than saved by eliminating broken bulbs, so easily smashed if laid on the bench or shelf.

During the last year or two we have been doing a big business in the sale of storage batteries and in repairing those already in use. This, of course, needed special knowledge, and I digested all the text-books on the matter that I could get hold of, and also spent some time at the factory. Now we claim our battery service is better than can be had even at the factory, for we give each job individual attention.

This, of course, necessitated installing an oxy-acetylene lead-burning outfit and the torches had a bad habit of blowing out the match that we tried to light them with. So we took an old vibrator coil, connected to an old set of batteries and a spark plug, with a press button switch just under the bench, the spark plug being let in flush with the bench. Now when we want a light, we press the switch, which throws a spark across the spark plug points as long as the switch is held in, and by holding the torch near it with the acetylene turned on we get a light, and it "never blows out."

We also have a bit of candle wick in a small metal case which is kept soaked in coal oil and when we need a light for any other purpose we hold the end of the candle wick near this spark—and there is the light. This is a great saver of matches, but it is not so much that as the fact that no matches are lying around. Should a live match lie on the floor and get trodden on, it will ignite any gasoline vapor that may be around and there you have everything needed for a bad fire. We have no matches in the place and consider we cut our fire risk down very considerably.



Inset, in the upper left hand corner, is a picture of A. M. Glover. In the picture of the shop's interior there are several interesting things to note: a wood platform to keep the workmen off the cement floor; bench power drill; old repairs kept up on ceiling out of the way; 2-ton hoist on track (upper right hand corner); small metal drawers for all small parts. The floor is kept clean and free from grease.

IN the old place I used to keep the accessories in a show case and it sold so many without any assistance from me that when I built my present place I decided to build in a real one and have it electrically lighted and heated to keep the goods in real good shape. It is well worth the cost and it makes lots of sales that would never otherwise come to us. A man seeing a handy thing, even though he has no immediate use for it, will often buy if it is nicely displayed. I made an error in not putting in show windows, so that possibly I depend on the showcases more than the man who has a good window.

Another improvement I have is for filling radiators with water. Most garages do this with an old can, and nine times out of ten they cannot find it when they want it. I have eliminated this trouble by piping the main to the gasoline pump and attaching about 10 ft. of half-inch hose. Now, while a car is being filled with gasoline the boy fills the radiator. We don't ask a man if he wants water. We just take the cap off as a matter of course, put the hose in, and fill her up. He gets clean water and gets it quickly. We don't have a can to lift or fill and, when you come to think of it, lifting that old water can about 100 times a day doesn't put you in any better shape to take care of other work.

While the car is still standing for gasoline, our air is piped right close and it is not necessary to move the car to inflate the tires and put in oil for the engine. We claim we can fill a car with gasoline, oil, water and air, without moving it— and do it all in three minutes. We believe that while these conveniences are good for us the customer appreciates them very highly and we have been told by motorists from the big cities that they have never seen a more convenient place.

SPEAKING of this last point, we claim that it is worth a dollar a day at least, to clean up the garage and we give charge of this to the one man. He has to keep it clean. It is swept out every night anyway, at 6 o'clock, but if it is necessary in the day it gets further sweeps. We have found that a man with a car that he keeps clean always prefers to keep it in a clean garage. The ladies' business comes our way, of course, for what lady wearing a smart dress would ever dream of going into a garage with puddles of grease and dirt all over the floor, when there is a clean place anywhere near?

We struck a good system for the sale of gasoline four years ago. We felt certain that some "charge" gasoline was never being booked in the rush of serving several people, so we got out a card with the numbers 1 to 25 printed along its two edges. We sell these cards as good for 25 gallons of gasoline. As a customer gets the gas his ticket is punched for the corresponding amount, and we can now say for sure that we do not miss any as it is a simple matter to "charge" a ticket. Even if we do miss it, as soon as it is presented for gasoline we know it is not paid for unless it is signed across its face by one of us. We think this is an improvement over the coupon system as the coupons become detached and lost, whereas this card is carried conveniently with the license cards as it is the same size.

Write Sales Letters Like You Talk,

Says Implement Dealer

"THE only reason I use sales letters," says W. J. Allin, a successful implement dealer of Chatham, Ont., "is because I don't have an opportunity to tell my customers personally all I want them to know about my store. I write my letters just as I would talk to a customer, except that I try to anticipate the questions he might ask."

Perhaps no better rule could be given for writing a sales letter than to write just as you would talk to a customer. High-sounding phrases and flawless grammar do not count for much; in a sales letter the reader wants to find out the same facts that he would if he talked with the salesman in the store. With his knowledge of the farmer and his implement needs the implement dealer has the essential requirements to write a good sales letter.

In selling an article in the store, naturally the first thing to do is to get the prospect's attention and interest. The same is true in the sales letter. Start out by telling the reader how he can do better work, save time or make more money with the article you have to sell. Mention some of its superior features and tell why they are superior to those in ordinary makes. Then follow this up with a brief description in order to prove the claims you have made, just as the salesman would do in the store. The reader will be led up to the description after his interest has been aroused by the important points mentioned at the beginning of the letter.

THE farmer is a practical man, especially when buying implements, and wants sound facts, but of course these facts should be given him in a logical manner. The successful salesman brings out one point at a time, beginning with the one which is most likely to draw the customer's interest. He avoids strong statements at the beginning that might create suspicion or antagonism. By being conservative he develops confidence, then brings in the strong claims for his machine. This same procedure applies to the sales letter, and the dealer experienced in making sales will naturally follow it, if he will think when writing the sales letter that he is simply making a sales talk to several persons at one time.

Special care must be taken not to arouse the reader's antagonism, because there is no opportunity for him to express his opinion and let you correct any false impressions. Whenever the reader loses confidence in the letter the strongest arguments lose their importance. A dealer who sends out a sales letter which begins, "You are not onto your job—," will not get anything like satisfactory returns from it. Many farmers resent such a statement. Rarely would a salesman make his approach in this way. He would likely start right out telling about the article he has to sell.

ALTHOUGH glaring statements and strong claims must be used cautiously, this does not mean that the sales letter should not have enthusiasm. The successful sales letter, as well as the successful salesman, must be filled with enthusiasm from start to finish. The dealer who has selected his stock with care and knows that he has what the farmer needs, cannot help being enthusiastic when talking about it. Confidence and earnestness breed enthusiasm. Write in the sales letter what you earnestly believe and it will not lack enthusiasm.

The appearance of a letter has much to do with the impression it makes. Farmers have sometimes been underestimated in this respect, but there should be no doubt that the present-day farmer appreciates neatness, careful arrangement and an attractive letter head as well as other business men. Many farmers have letter heads of their own and show considerable ability in their arrangement and layout. Adopting the "you" style of address and taking the reader's viewpoint also tend to create a favorable impression for your message.

After the reader has become interested in the letter and sufficient explanation and argument have been made, the next step is to induce him to act upon your suggestion. When the salesman comes to the end of his talk he tries to close the sale by securing the customer's order. As every salesman knows, there is almost no limit to the different kinds of inducements offered to close a sale.

IN principle the inducement in the sales letter is much the same, but usually its purpose is to get the prospect in the store rather than to make a direct sale. In this case the inducement may be the prospect's advantage in seeing the article mentioned in the letter, and in the full information, service and courteous treatment he will receive. Care must be taken to avoid making the inducements too liberal. If the sales letter promises anything that cannot be made good, all the interest gained will prove of no value and the sale may be lost. Price-cutting, offers of unlimited service and similar inducements which should be guarded against by the salesman, should also be avoided in the sales letter.

If the reader becomes convinced that you have the goods and service he wants, he will likely visit the store without such inducements. When the sales letter is sent out to secure direct orders, as in the case of binder twine, supplies and the like, the closing inducements should usually be suggestions regarding the advantages of the articles for sale and a reason if possible why the reader should order at once.

There is one question that has kept numerous farmers from purchasing tractors: that is, whether they will work satisfactorily on side hills and plow deep enough going up steep grades.

At the Walla Walla, Washington, tractor demonstration, April 23-4-5, the Lauson tractor demonstrated that the wheel type tractor can handle this work satisfactorily. It worked on a 43% side hill and 35% up grade pulling three 14" plows 7" deep, according to official report, competing successfully with the larger caterpillar type machines. The tractor on this grade is shown in the lower right hand picture. The lower left shows a 35% side grade; the top shows a 35% up grade.

Make the Most of Your Fall Months

By B. J. PAULSON

Farmers in your community will need tractors for plowing.

FALL in line for the fall selling campaign! Forward with the
TRACTORS,
PLOWS,
THRESHERS,
MANURE-SPREADERS,
HAY-BALERS,
SMALL ENGINES,
WAGONS,
CORN-SHELLERS,
ENSILAGE-CUTTERS,
GRAIN DRILLS
DISC HARROWS,
FEED-GRINDERS,
CREAM SEPARATORS,
AND MOTOR TRUCKS!

The 1919 crop will soon be harvested and threshed and the goose will be hanging high! The farmer will have money in his pocket and will be looking for some place to put it besides the bank. Don't let him spend it foolishly—and don't let him put it all in the bank. Help him invest it where it will do him the most good. You know how!

For instance, the farmers in your community will need tractors for fall plowing. Maybe they think they don't need 'em, but if you're the right kind of a salesman you can demonstrate to their entire satisfaction that they do—that a tractor is not an expense but an investment—one of the best investments a farmer can make. The farmers who have a big acreage of fall plowing ahead and are, perhaps, rushed for time on account of harvesting and threshing, will find the tractor a regular life-saver when it comes to turning this acreage in record time, discing and seeding it.

How many farmers do you know who don't put in as big a crop as they'd like to and know they ought to, just because they haven't got the necessary equipment to get their fall plowing done during the limited time at their disposal between harvest and freezing-up time? The tractor will work twenty-four hours a day in a pinch—and it's a cinch that it works more economically than horses. And as for the length of time a tractor will last—well, the writer knows of tractors in Canada that have been in steady use every year since 1908—and are still on the job to-day, apparently giving just as good satisfaction as ever.

ASIDE from tractors for plowing, discing, seeding, etc., there is a big sales opportunity for tractors for threshing power, to say nothing of the sale of threshers as an individual proposition. Small threshing outfits such as those operated by 10-20 or 15-30 tractors are growing in popularity right along—and the need for threshers in Canada is increasing in proportion to the development of agriculture—especially in Western Canada. The grain crops will keep growing in volume every year yet for a long time to come.

In the corn and alfalfa districts the ensilage cutter offers another excellent sales possibility to tractor farmers. The silo idea is growing in Canada and if the implements dealers would get behind it, it would grow still faster. It has been proved conclusively by various agricultural experimental stations and practical farmers that the silo saves from 30 per cent. to 40 per cent. of the corn that is wasted by shocking.

A tractor with a belt rating of from 10 to 16 h.p. will handle an ensilage cutter having a capacity of 10 to 12 tons of silage per hour while a tractor with a 16 to 20 h.p. rating will chop 12 to 16 tons an hour and a 10 to 25 h.p. motor, 16 to 25 tons.

If the dealer would post himself on this matter of silage he shouldn't experience much trouble in convincing the corn-growing farmer that it pays to feed silage—and that it pays biggest when the farmer has a tractor with which to operate the ensilage cutter.

AND between sermons on tractors and tractor power belt equipment the live dealer should learn to preach the gospel of the manure spreader—tell the farmer how he can increase his yield per acre by a judicious application of barnyard manure properly spread and how he can haul and spread twenty loads of manure in a day with a spreader while he'd be handling only nine with the wagon. Every ton of cow manure that the farmer leaves in his barnyard represents about $5.00 worth of valuable fertilizer going to waste. If some one should leave a pile of $5.00 bills lying out behind the barn you wouldn't catch the farmer letting 'em go to waste! He'd be out there in half a minute with a bushel basket and he wouldn't leave the spot until he had corraled every last piece of currency! Its up to the implement agent to convince the farmer that every ton of manure left lying behind the barn is a $5.00 bill that isn't working for him. Then he'll sell spreaders like pink lemonade at the circus!

Aside from tractors for plowing, etc., there is a big sales opportunity for tractors for threshing power, to say nothing of the sale of threshers as an individual proposition.

In localities where hay is raised on a considerable scale the implement agent will find hay-baling presses champing at the bit in their desire to get out in the country and bale hay so that it will occupy just one-fifth of the space it takes up when loose, and be made readily available for railway transportation to the city market where the farmer will command top prices for his product. Hay-baling also makes a profitable form of custom work that offers plenty of selling opportunities in the haying sections of the Dominion. There are quite a number of types and sizes of baling presses now being made by different manufacturers—belt presses that can be operated with a small tractor, horse presses that are operated by a team of horses and presses having a self-contained power plant, consisting of a stationary engine mounted on the baling press trucks.

THE up-and-doing dealer who has reached the point where he has added motor trucks to his line will find the fall months the best season of the year to sell trucks to his farm trade. For one thing, the average farmer's greatest volume of hauling is done during the fall months and as a rule he can but ill-afford to lose the time from plowing required to haul his crops to the elevator. The motor truck will do the job in about one-third the time required with horses and at about one-half the expense. For another thing, the purchase of a motor truck involves a considerable outlay of money, so the logical time to get the farmer's signature on the dotted line is while he has money in the bank from his harvest—or is about to get it.

Feed grinders, corn shellers and cream separators are always seasonable, as is also the small general-utility engine. The engine, however, is an exceptionally good fall trade item because of the fact that it will furnish power for winter wood-sawing, corn-shelling, feed grinding, etc. Good engines mean clean, profitable sales.

Aside from the considerations already enumerated, there is also the matter of selling goods during the fall months with an eye to the immediate future. To-day the farmer buying new equipment takes long chances on delivery when wanted, unless he places his order well in advance of the date actually needed. He faces constantly the menace of strikes. By ordering his spring machines and implements during the fall months, *for immediate delivery,* he will be reasonably sure of having the new implements on hand when he is ready to begin his spring work, instead of being held up indefintely due to shipping delays caused by unsettled industrial conditions. The live implement agent takes advantage of such arguments as this, thereby helping to build up his fall sales volume to a considerable degree.

It is but natural that the farmer should feel better able financially to invest in new equipment of all kinds during the fall months than any other season of the year, because he has money in his pocket from the current harvest—and when a man feels prosperous he is always in a buying mood. And this, after all is said and done, is the big selling factor—get the farmer's order while he is in a buying mood and has the money to back it!

"Joy, Joy, Joy!"

UNDER the striking head-line: "'Joy, Joy, Joy! sang Ford motors in Dawson's May Street Garage To-day," the arrival of two new citizens in Fort William is announced by the *Times-Journal.* Here's the story, and it'll take some beating!:

"Around the Ford garage on May street, yesterday, every motor cylinder was functioning and the song the little Fords all sang in unison was one of exceeding joy. All nature was beneficent, smiling. The sun outside seemed dancing a carnival jig and the high wind roared seductive melodies round the angles of the building.

"Urbane Harry Dawson, proprietor, tried to look serious and businesslike when customers dropped in, but the smile that wouldn't come off wriggled back into place in spite of his best endeavors. Harry wasn't to blame—it's mighty hard to be businesslike and serious when the doctor has just 'phoned you: "They're twins, bouncing boys and everybody doing well."

I asked her to lean out and see if the tire was flat. "Not enough to hurt," she reported. "It's just flat on the lower side."—Huck.

And between sermons on tractors and tractor power belt equipment, a live dealer should learn to preach the gospel of the manure spreader.

$1,000 A DAY! Wetaskiwin Hogs Help Fatten Implement Sales

"Three M" Firm Member Discloses Secrets of Success to M.T.I. Readers

By E. H. SCOTT

ONE broiling hot afternoon about the middle of July, 1 dropped in on the firm of Macarthur, Merner and McCallum, implement dealers at Wetaskiwin, Alberta. It was an off season of the year, and I expected to find the manager and clerks lounging around in arm chairs, as I had found in practically every implement warehouse I had visited during two strenuous weeks on the road. I was disappointed. Instead the office resembled the inside of a departmental store around the Christmas season. It was humming with life and activity. Two men in their shirt sleeves were waiting on farmers at the counter, which separated the business office from the other portion of the room; other farmers were waiting on a bench which had been provided for their use; above all—the clatter of a typewriter was mingled with the bark of a small gasoline engine which was being demonstrated by an assistant in the adjoining premises.

I asked the manager, when I could get in a word, when he would have a spare moment.

"Come around any time this evening, we're here every night," he replied.

I would have waited a week to get the explanation of that busy office. My curiosity was further piqued by a brief item in the local paper which mentioned that the firm had disposed of ten mowers on a certain day, and by the 16-inch, two column advertisement of this company in the same paper. It announced that the firm sold McLaughlin and Chevrolet cars, and that the last car of Chevrolets lasted only two days. It further announced that the firm handled livestock, hail insurance, binder twine, tractors, cream separators, and all kinds of implements. Later I was to find out that they handled also lightning rods. Windmills, pumps and piping (for which they maintained a special shop), gasoline engines, washing machines, three kinds of tractors, and a full line of implements and repairs from three or four well-known manufacturers.

AN original touch to the advertisement was the formation of the firm's trade mark into three capital M's, in the shape of a pyramid with the caption above reading "The three M combination." The residence telephone numbers of all three members of the firm were given, which, by the way, is a feature of the story.

Later in the evening in talking with Mr. Macarthur, the head of the firm, I could quite believe his remark: "Pretty nearly every farmer who comes to town has got to come and see us about one thing or another."

The remarkable feature of this interview was the story of how business was "whooping along," despite the fact that the sale of implements has fallen off very materially from other years, due to light crop, and to the fact that the farmers appear to be under the illusion that prices are due for a drop.

Mr. Macarthur turned to his synoptic and showed me that the cash business transacted by the firm in May was $15,900, for June $21,500, and for the first 15 days of July $12,700. The credit business for these periods he said would be as much again. He turned back and showed me that the cash business from February 15 to March 31 amounted to $24,300, while for April it was $22,900. Then he showed me the auditor's statement of the firm's accounts for the period from February 15, when the present partnership was formed, until April 30. This is how it read:

Implement sales		$ 9,500
Gas and garage		1,400
Automobile sales		11,100
Pump sales		600
Hog sales		26,100
Cattle sales		9,800
Profit	$5,500	$58,500

IT will be observed that the cattle and hog sales comprise the greatest volume of business, and, according to Mr. Macarthur, this is one of the strongest features of the business not only from the standpoint of the actual money it brings in, but from the fact that all business in connection with the sale and purchase of cattle is transacted at the implement warehouse, which brings a constant stream of farmers, consequent friendships with the firm, and consequent business transacted in all the various side lines. The cattle business is transacted exclusively by Mr. MacCallum, a thoroughly experienced stockman, and one of the three members of the firm.

It was pointed out by Mr. Macarthur that there was a very heavy general business done during the months of June and July when few cattle or hogs were moving.

At least five times during a lengthy interview with Mr. Macarthur, in which the chief topic discussed was the methods of doing a successful business, he burst out with the remark, "Giving service on repairs is the greatest thing of all to bring business." He was obsessed with this one idea of developing trade, and elaborated on it from time to time.

"Why, just at this present moment," he said, "my partner is out with my car on a drive eighteen miles into the country with repairs for an allwork tractor which we sold a man last summer. He telephoned in just before supper that he could not go on with his work to-morrow morning unless he had that repair part, and the only thing to do was to 'hop to it' and take it out to him. I have sent my men out many a night until 11 o'clock making repairs to broken pump rods, and time and again when a gas engine used for pumping water was hung up we loaned another one while repairs were being made in order that the cattle might have water. There are times, too, that we have waited up until 2 a.m. to get repairs off the train from Edmonton, and at that hour rushed them out to the farm in order that the work might go on in a busy season."

"OF course the farmers take advantage of you," Mr. Macathur continued, "and it is aggravating at times to be called out for some trivial thing that called only for a display of a little horse sense, but our policy is to keep smiling. No good to pull a long face and raise Cain once you are on the job. It can only get you in wrong, and after all the main thing you are fishing for is the farmers' trade in the future. There are many dealers that fight shy of this repair work; we encourage it. We publish our house telephone numbers with all our advertisements, and they know they can get any one of the three of us at any hour of the night. They do not hesitate to call us up, either.

"It is the fellows who have bought on credit, or who have taken a machine out on trial who are the worst sinners in this respect. They seem to feel that they have the whip hand over you, and so they have, and what are you going to do about it? What we do is to keep two cars on the road practically all the time, running out and in with repairs, and we find it pays. By this service we place our customers under an obligation to deal with us, and by keeping in constant touch with the farmers we find out their needs in the various lines we handle. By prompt service in busy seasons we educate the farmers to the belief that we are straining every effort to help and co-operate with them, and this, coupled with the fact that we always stock a very heavy line of repairs, brings them running to us when they get in trouble.

"By having farmers come to us to secure repairs and to deal in cattle or secure hail insurance we achieve the same result as the big city departmental store which draws the crowd by putting on special offerings and then sells it a large quantity of staple goods.

"Of course," Mr. Macarthur continued," a dealer can lose considerable money on repairs by not keeping a strict account of their cost. We have a system of book-keeping here that records the cost of telegraphing to Edmonton or Calgary (when necessary), as well as the cost of using the long distance telephone, and the detail of express charges. A little carelessness here means constant loss."

IN the course of the conversation this dealer told of the methods employed to keep a record of prospects, and to follow them up. He also expressed his thorough belief in newspaper advertising. In this latter regard he said the firm used the same large space in every issue of the weekly newspaper, never failing to make a complete change with every issue. It was also their policy to keep their business before the public eye by using advertisements on the motion screen. Their screen advertisement at that time was a motion picture drawn by a Calgary artist showing an automobile wreck on the street, the wrecked car being hurried into the firm's garage in a very sick condition, and in a moment driven out by its smiling owner fully repaired.

It is in the winter and early spring that the prospects are secured.

"You see that big 'station agent' stove," said Mr. Macarthur; "well we keep that 'humping' all winter long to bring the boys around, and we always have a box of cigars handy for special occasions. Our office is not much for looks, but we know how to make the farmers feel at home and we don't worry much if they come in and spit tobacco juice on the stove. It may be all right to have your classy display room with hardwood floors, and everything spic and span in the warehouse and garage, but we know from our experience that a farmer does not like things too fussy. They come to our office and they know they are welcome, and it is then that they discuss farming from A to Z. It is then, too, that we get a line on their likes and dislikes. John Smith has been observing the work of a cultivator on the farms of his neighbors and is resolved to get one. Peter Jones confesses himself vehemently a believer in the tractor, and so it goes, and all the time we are jotting these things down in our little book.

"In the course of a week or two, John Smith gets an attractive booklet from the factory on a certain cultivator that we have for sale, and about the same time a very elaborately-illustrated circular goes to Peter Jones from a certain tractor firm. In a word, we cooperate with all the manufacturers in supplying prospective customers with literature. We supply a mailing list to the John Deere Plow Company, who send out once a month a publication called 'Furrows.' The Chevrolet Company sends us 25 copies of the Chevrolet *Review* each month, which our book-keeper mails out to prospects, and in like manner literature is sent from the Cockshutt Company to harvest prospects, and by the Rumley Tractor Company. We are great believers in the mailing list."

NO better instance of co-operation between the manufacturer and the dealer could be furnished than the action of the Cockshutt Company in sending to this Wetaskiwin firm a list of prospective purchasers of machinery, whose names were taken when they showed a keen interest in certain exhibits at the Edmonton fair. The Wetaskiwin firm at once wrote each of these farmers a personal letter, and they intend to follow this up by mailing out literature.

In connection with the Edmonton fair there is an amusing story told of a farmer who happened to remark that the agent in his town had sold him a manure spreader that spring.

"Pretty good fellow, isn't he?" asked the manager. "Yes, good manure spreader," was the response, and the manager has been wondering ever since whether he referred to the machine or the man.

Last year this firm was operated under the name of Walker and Macarthur, the partnership being broken up on the death of Mr. Walker from influenza. The firm had an exceptional sale of tractors during 1918, disposing of 15 Waterloo Boy Tractors, 5 Rumleys and 4 Allwork. The latter four were disposed of in one day toward the end of the season, just after the firm had taken the agency. This tractor was successfully demonstrated on the streets, by being "hooked up" to one of the town graders.

A successful method of selling tractors has been adopted by the firm which makes a practice of taking

farmers out to view the work and operations of the machine while it is actually at work on a farm. In this connection Mr. Macarthur states that he has never known a purchaser not to praise his particular tractor to the skies when the visitor is introduced. This, he states, is one of the psychological features of the tractor game. No matter how dissatisfied a man is he will always boost for his own before a stranger.

The sale of ten mowers in one day during July was accomplished by hard canvassing, and was made possible by the sale of five mowers to one rancher who owns several sections of land. This firm believes in clearing out its stock of any kind of implements rather than keep them stored away for another year, and this applies to mowers. Even if they have to be sacrificed there will be none left on the floor. This class of goods is, of course shipped on consignment, but even when there is no capital tied up it is the policy to avoid keeping shop-ridden goods.

DISCUSSING in general the sale of farm machinery, Mr. Macarthur laid down as two essentials of business the keeping of a wide assortment of the very best implements on the market, and an unwavering and enthusiastic belief in the machine you are selling.

"We do not sell anything," he said, "that we cannot recommend so strongly as to influence the farmer to buy. In other words, we are thoroughly 'sold' ourselves on the line of goods we handle, and we can talk about them with force and conviction."

One thing that has made for the success of this firm is that it caters to a mixed farming district. There have been only fair crops in this district in recent years, but the farmers obtain cash for the great quantities of cream they sell, as well as from the sale of cattle and hogs. The livestock end of the business helps immensely. The other day, for instance, a foreigner came in and wanted a small gasoline engine and a power washing machine. He offered to give in trade a cow and a heifer. The deal was made with the result that a profit was not only made on the goods sold, but a further profit of $40 was made in the disposal of the livestock. Mixing with farmers all the time Mr. McCallum, who handles the stock interests of the firm, is constantly being tipped off to the implement needs of his customers, and so one department dove-tails nicely into the other.

A source of very considerable business this year is the land settlement work of the Dominion Government by which soldiers are placed on the land with a very handsome money grant to enable them to get a start. In every case the men are in need of new implements and the Wetaskiwin firm is keeping close watch on the situation. They suggest that other implement men throughout the West should make a special effort to land this fine business.

Mention was made that a carload of Chevrolet cars had been sold the day after it arrived. All told, the firm has disposed of twenty-six of these cars this year, in addition to selling several others taken in trade. Last year they sold 53 Chevrolets. They have only recently taken the agency for the McLaughlin cars. It might be mentioned, in passing, that in addition to all their other lines, they handle tires and auto accessories, including a well-known line of storage batteries.

Nine men are employed to handle their extensive business.

How Long Should be Allowed for Charging Back Unacceptable Notes?

By WILFRID A. HARVEY

Here is the first of a series of articles dealing with the problems of the agricultural implement dealer: "The time limit for charging back unacceptable notes." It is written by a dealer of many years' experience. We would like to hear from other dealers of their experiences, or views on this topic. For the best letter we will send you a subscription to MACLEAN'S MAGAZINE for one year—or the cash, should you prefer it.

During the next few months, other implement dealers' problems will be discussed.

These will include: A general increase needed in the margin on sale of small implements; the evils of small discounts on small farm machinery and parts; should there be a general increase in the margin on sale of repairs?

WHAT time limit should be placed on the charging back of notes by the wholesaler to the retail implement dealer? At a meeting held in Regina a few weeks ago, between representatives of the implement dealers and the branch house managers of Saskatchewan, this question was among those up for discussion. The dealers contended that thirty days should be sufficient for the acceptance or rejection of notes. They pointed out that in the few cases where an agent did not feel able to decide for himself as to the financial standing of a customer, it did not take the companies nearly that long to make a decision.

The wholesalers expressed their viewpoint. On behalf of the wholesalers it was suggested that not all dealers were careful in extending credit; some were reckless and the company must protect its interests. One manager thought that 30 days was quite inadequate from the wholesalers' standpoint, and suggested six months. With regard to the time limit, the wholesalers held that six months was necessary, whilst the dealers contended that 60 days was ample. Mr. Polson, an office of the Retail Merchants' Association executive, felt that the wholesalers had a genuine desire to do their best for the dealer; it was obviously a matter of mutual interest. Any note that could not be settled in 60 days, he claimed, should be refused. Several wholesalers agreed to recommend four months from date note was sent in; some three months from date of fall settlement.

ON one contract the company reserves the right to charge back notes any time within six months of annual settlement date, which is usually about the first of November, that is to say, if an agent sells a seeder, for instance, on the first of April, the company would have thirteen months in which to decide whether they wanted the note or not.

This clause usually works to the disadvantage of the dealer with financial resources more than to that of the shoe-string agent, as, with the latter, it usually keeeps him guessing to yap up his repair account with the company, so it obviously is far better for them to try and colect from the customer than it would be from their agent.

This same company has its collection department in a different town from the sales department, and the dealer has no official connection with the collection department. So he has no way of ascertaining how any customer who may be a little slow is meeting his notes.

It is seldom the same collector has the same territory two seasons running and apparently any person who is able to produce a bond can get employment as collector. Some astonishing specimens are encountered who are absolutely unable to contend successfully with the average farmer who is a little hard up and who believes it is the duty of the implement company to carry him until it is quite convenient for him to pay. This, very often, recoils back on the dealer who is called upon to take up a note made by a farmer, from whom there has been no real attempt to get the money, and which is returned to the dealer after the collection season has passed.

IN one case that happened last year, I sold to a farmer who did not reveal the fact that he owed the company for machinery he had bought two years before in a neighboring town. When fall came the crop was disappointing, but this farmer wanted to do the right thing. He said he would pay part of his old indebtedness and part on his new, but the collector insisted on applying all the amount on the old notes, with the result that the *new note was charged back* in the winter.

The company reserves to itself the sole right of determining whether a note is acceptable or not. It often happens that a farmer's financial position has altered very much for the worse between the date of the sale and the date of the maturity of the note. Under the present contracts the agent is required to take the risk, for which he is paid nothing—but for which the companies charge in their time prices on machinery.

If the dealer wants to keep his notes and attend to his collections himself, and try to protect himself against the risk he has to assume anyway, he is compelled to put up the cash for the machinery that he has to sell on time.

It has also happened that an agent has incurred the ill-will of the sales manager by selling competing lines, or in some other manner, in which case the manager is not likely to make much protest when the collection department wants to return notes to be charged back to this dealer.

THE evil of the system is this; that the present contracts are so one-sided that, no matter who is to blame, the farmer who may make some foolish investment that puts him on the rocks; the collection department, through negligence or carelessness in forgetting to look after that particular collection, or the sales department who, on finding the party not very strong financially, do not notify the dealer so that he can assist in the collection—no matter where the blame rests, THE DEALER HAS TO BE THE VICTIM.

ECHO ANSWERS: WHY?

THE *problem of the gas age as propounded by an implement agent: "Why do farmers who buy implements and tractors expect to be pampered and run after by the dealer on every slight provocation, when they do not expect any other class of retailer in the world to run after them? If their sewing machines, pumps, bicycles, gas engines, phonographs, pianos, plumbing, electric light plants or any number of other things go wrong do they hop to a telephone and have the merchant or dealer come running hot-foot to fix them? Not on your life. They bring the machine to town and pay for the repairs. The implement man is the prize goat, and the farmer knows it."*

TRUCKS MUST COME

A. M. BROWN, implement dealer at Leader, Sask., is convinced of the utility of the motor truck in that part of the country for hauling grain over long distances. He has been advised that the Packard Company is manufacturing a farm truck with special gears for the purpose of hauling one or two trailers. The use of trailers would, he believes, effect such marked economy as to create a demand for trucks from farmers or groups of farmers who had seen them in operation. Answering the argument that bad roads in Saskatchewan would prevent the introduction of the truck, Mr. Brown states that even after twenty-four hours' rain in midsummer or fall the roads dry up within a day.

BETTER ROADS—MORE TRUCKS

J. CAMPBELL, agent for the John Deere Plow Company, at Gull Lake, Sask., is one of those who see a great future for the motor truck in Western Canada. in this district there are many farmers who have to make long hauls with wheat to the elevators, and Mr. Campbell states that, judging from the number of enquiries received, there would have been a number of trucks sold in that district if crop conditions had been up to the mark. His statements are generally endorsed by other agents in Saskatchewan and Alberta.

An opposite view is taken by E. Bailey, a traveller for the Rumley tractor. He states that his firm sent out enquiries to all its travelling men and agents in the West, asking the possibilities of selling motor tractors in the prairie provinces. He replied to this enquiry, stating that the truck could not be sold in large quantities in the West until road conditions had been improved.

"LODGINGS FOR MAN AND BEAST!"

Our cars farm thirsty; why can't we get as good treatment? Some towns do provide adequate accommodation, but how many motorists don't know of many, many towns that don't.

—Exchange.

Trucks in the West By E. H. SCOTT

"IF there had been a good crop this year many trucks would have been sold in this district, and the same is true of many districts in Saskatchewan and Alberta," said the senior member of the firm of Bachus and Loree, implement dealers at Cabri, Sask.

"There were a lot of enquiries last year," he continued, "and the field was just ripe for sales this year if the drought had not come. I had many farmers ask last year and this spring about one- and two-ton trucks, and all of them agreed that in hauling wheat, as they had to, a distance of 25 or 30 miles the truck would prove itself a big money-maker over the horse-drawn vehicle. Not only could the farmer make three of these fifty-mile round trips in the time it would take to make one with horses, but on each trip he could haul two or three times the load by using trailers.

"A farmer in any district such as this, where long hauls are common, could make money hauling the grain of his neighbors with a two-ton truck," said Mr. Bachus, "and besides he could haul back supplies for these neighbors and for country stores. He could use the truck on the farm for practically every purpose to which the horse-drawn wagons are put, and in the winter time when not in use over roads that are good it would not be eating its head off in the barn."

A traveler selling McLaughlin cars over a wide area in Alberta agreed with Mr. Bachus that the West is ready for motor trucks. He stated that wherever he went he heard discussions with regard to the economy of their operation, and that, in the absence of any trucks being offered for sale at the garages, the dealers were making over old cars for the farmers to be used as trucks. Next year, he says, should see the sale of scores and hundreds of trucks on the prairies.

International Kerosene Engines

WE are now well into the Twentieth Century and well into the age of power on the farm. Yet the greatest possibilities for the dealer in farm power are far from realized.

Out along the several roads leading into your town there is a great deal of dissatisfaction, discomfort, and irritation growing out of the lack of small engine power. On every farm there are time-and-energy-wasting drudge jobs—pumping, washing, sawing, separator turning, churning, grinding, shelling, etc.

There is the crying need for small engine power. *There* is your opportunity. You can place **International Engines** on a dozen or more such farms this year if you want to. Internationals are popular, well made, operating on low cost kerosene, built in 1½, 3, and 6 h.p. sizes.

THE agent who is not now selling **International Engines** will benefit by taking the matter up with the nearest branch house. See the blockman at your earliest opportunity.

INTERNATIONAL HARVESTER COMPANY
OF CANADA LTD

WESTERN BRANCHES — BRANDON WINNIPEG MAN CALGARY EDMONTON LETHBRIDGE, ALTA., ESTEVAN, N BATTLEFORD REGINA SASKATOON YORKTON, SASK
EASTERN BRANCHES — HAMILTON, LONDON, OTTAWA, ONT., MONTREAL, QUEBEC, QUE., ST JOHN, N. B.

Automotive Accessory Manufacturers are Rapidly Increasing in Canada

THE last few years have seen in Canada a rapid growth in the manufacture of automobile accessories. Before the war, there were barely a dozen manufacturers in this country, but now there are nearly three score. For a long time after the first automobile was invented—almost a quarter of a century ago, you must remember—American manufacturers were overwhelmingly predominant in the Canadian automobile accessory field. There were a few Canadian pioneers, but they had, in most instances, a territory such that they could not manufacture in as large quantities, and, consequently, could not turn out products at as low a cost.

Gradually, more and more Canadian firms are engaging in the manufacture of automotive accessories previously monopilized by the States. A large number of these firms have furnished the CANADIAN MOTOR TRACTOR AND IMPLEMENT TRADE JOURNAL with details of their organization and products. This information, taken alphabetically, is here presented for the benefit of M. T. I. readers.

THE Adamson Manufacturing Co., 67 Bay Street North, Hamilton, Ont., manufacture vulcanizers, automobile accessories and supplies. Five various types of vulcanizers are made, which will handle work from one to twelve inches on tube repairs. This concern also makes lined brake shoes for Fords; and Adamson's Repair Gum.

THE main office and factory of the Auto Products Co., Inc., is located at Buffalo, N. Y. but there is a Canadian office and factory at Fort Erie, Ontario. They specialize on repair and refinish products.

GEORGE H. BROUGHTON, 122 Wellington St. W., Toronto, has been in the Steel Blow-out patch business for the past seven years. He specializes on clasps, or boots, for auto tires, and recently invaded the field across the border, as he now has a manufacturing plant in the United States.

CANADIAN Durkee-Atwood Co., Ltd., has factories in Minneapolis, Minn., and Cleveland, Ohio, as well as 3 McCaul Street, Toronto. The chief products put up in the Canadian branch include: Rie Nie fabric and All-Rubber patches, radiator and valve-grinding compounds, and liquid radiator cement.

THE Canadian Winkley Co., Ltd., located at Windsor, Ont., manufacture oiling devices, particularly. Their products include press steel and brass grease cups, oil hole covers, oil cups (both screw top and hinged lid), pattern-makers' brass dowel pins, spring shackle bolts, and small metal stampings in quantities.

THE Chapman Double Ball Bearing Co., of Canada, Limited, 339-351 Sorauren Avenue, Toronto, are manufacturers of ball bearings and elevating transfer trucks. Auto ball bearings, this company states, are of both the annular and thrust type. Front wheel roller bearings, for replacing the cup and cone bearing on Fords and the Chevrolet 490, and a ball thrust bearing, to replace the plain thrust washers of the left side of the differential in Ford and Chevrolet 490 rear axles, also are made.

THE Dunlop Tire and Rubber Co., Ltd., has its head office at Toronto, with branches in Victoria, Vancouver, Edmonton, Calgary, Saskatoon, Regina, Winnipeg, London, Hamilton, Ottawa, Montreal, St. John, N. B., and Halifax. Warren Y. Soper is president and J Westren, secretary and general manager. This is one of the pioneer companies and manufactures almost everything in the rubber line, including auto tires and tubes, bumpers, gasket strips, rubber cements, gums (unvulcanized, etc.), rubber hose for all purposes, tire paint, No-cement and plain rubber patches, tire cut healers, rubber valves, and valve gum, and many other rubber products and sundries.

THE Goodyear Tire & Rubber Co. of Canada began business in March, 1910, with a staff of four or five people.

In 1910 Goodyear purchased the Durham Rubber Co.'s plant at Bowmanville.

By 1916 it became necessary to secure an additional location for a tire plant. Accordingly twenty-seven acres of land was purchased at New Toronto. Here actual production began in the fall of 1917. Yearly sales have increased ten-fold in eight years.

C. H. Carlisle, the "father" of the Canadian firm, is at present its treasurer and general manager. He has co-operating with him R. P. D. Graham, vice-president; J. G. Lane, Secretary and Assistant Treasurer; E. H. Koken, Factory Superintendent; and H. C. Lower, General Sales Manager.

GUTTA-PERCHA and Rubber Co., Ltd., has its head office located at 47 Yonge St., Toronto, and branches in the leading Canadian cities. This concern is also a pioneer in the Canadian industry, having been founded in 1883. C. W. Candee is president and general manager, S. T. Warren is the secretary. This company manufactures automobile and motorcycle covers and tubes (Maltese Cross Tread) and the following motor accessories: air bags, blow-out patches, Hook-on boot, Lace-on boot, flat fabric patches, floating flaps, gasoline hose, radiator hose, tonneau mats, running board mats, reliners, pedal rubbers, (all cars), cementless patches, "Ajax" patches, flat water pails, rubber mallets, etc.

HOLTON Hood Clip Co., is one automotive accessory concern located in the West, its address being 1418, 1st Street West, Calgary. The Holton Hood Clip was patented by Edward Holton, the present president of the company, and placed on the market in June, 1918. The sales department is in the hands of Mr. Davidson. Besides the clip, this company is marketing the Holton Handy Oil Tester.

THE Machine & Stamping Company, Limited, 209 King St., West, Toronto, as a subsidiary of the Russell Motor Car Company, Limited, was formed in January, 1916. During the war they built up a stamping business in parts connected with the manufacture of time fuses. When the Armistice was signed and war work stopped, it found the Machine & Stamping Company had been looking ahead for the change from war to peace activity, and was ready to manufacture phonograph motors, bicycle chains and the "M. & S." spark plug.

Later on it was decided to extend their manufacturing lines to automobile parts, and at present a modern shop for manufacturing automobile transmisions has been installed.

T. A. Russell is president of the company, and David Ayr, formerly with the Pierce-Arrow Motor Car Co., of Buffalo, N. Y., and the Brown & Sharpe Mfg., Co., of Providence, R. I., is general manager.

THE McCoy Auto Lock Co., has factories in Buffalo, N. Y., and Hamilton, Ontario. The address of the Canadian factory is 50 John St. North. This concern specializes in the manufacture of transmission automobile locks. F. A. Robertson is the Canadian manager.

THE McKinnon Industries, Limited, an established concern of thirty-six years, are equipped to supply the Canadian automotive industries with units and parts heretofore imported from the United States.

The more important lines manufactured by this company at the present time are automobile radiators, transmissions for automobiles, trucks, and tractors; a complete differential assembly used on rear axles for trucks and passenger cars; and a complete line of steel drop forgings and castings.

The controlling interests of the McKinnon Industries are identical with those of the McKinnon Dash Company, of whom they are the successors, with L. E. McKinnon, as president and general manager, and J. C. Notman as Vice-President and general sales manager. D. S. Brisbin, assistant sales manager; R. A. McKinnon, manager of production; J. W. McKinnon, manager malleable iron production.

MOTOR Products Corporation, head office in Detroit, Mich., and Canadian plant in Walkerville, Ont., is a concern which succeeded the Universal Metal Co., Superior Mfg. Co., Vanguard Mfg. Co., Rands Mfg. Co., Diamond Mfg. Co., and the Diamond Mfg., Co., of Walkerville. H. J. Stoops is the Canadian manager. his company manufactures windshields, front axle radius rods for Fords, steel tool boxes, foot and robe rails, hub caps, and various types of diminishing view and beveled type mirrors.

THE National Acme Company, Montreal, manufactures A.L.A.M., and S.A.E. cap screws, A. L. A. M. and S. A. E. plain and estellated nuts, and U. S. standard screws and nuts for the automobile trade. Special screw machine products are also made. The manager is P. F. Mellinger.

PARMENTER and Bulloch Co., Gananoque, Ontario, are among the oldest manufacturing concerns in the Dominion, having been established in 1864. Their products which come under the heading of automobile accessories include copper brake band rivets and bifurcated brake band rivets.

REN Automotive Supply Mfg. Co., Preston, Ontario, was formed December, 1918, to acquire Canadian patent rights on useful automotive accessories. Work is being commenced this month on the new factory in Preston, on the completion of which it is designed to take on added lines. The accessory specialized on at present is the hold-tight rim wedge plate, sold as a cure for squeaky demountable rims of the wedge type. In September the Ren Co. intends to introduce to the Canadian market the Renasco Radiator Protector.

SWEDISH Crucible Steel Co. head offices are located in Detroit, with a Canadian plant in Walkerville, Ontario. There is a separately incorporated Canadian Company. This concern specializes in "Olson Quality Equipment" for Ford ton trucks. These items of equipment are made in Canada and include frame and drive shaft extension with side springs, and frame extension with side springs. These can be installed without drilling in.

THE White Machine Works, Limited, Windsor, Ontario, manufacture a large number of accessories, but specialize in pistons, piston rings, and steering wheels. This is the only concern in Canada manufacturing a standard lap joint, or angle cut, piston ring for manufacturers and the jobbing trade.

THE Woodworth Manufacturing Corporation of Niagara Falls, Ont., was organized in January, 1917, to buy out the Leather Tire Goods Company, who for some years had been making a steel studded automobile tire covering called the Woodworth Tread.

The officers of the Woodworth Manufacturing Corporation are: C. B. Woodworth, president; D. Woodworth, vice-president and L. J. Bell, secreatry. Since organizing in 1917, the Woodworth Manufacturing Corporation has placed on the market in Canada, a number of accessories, namely: lubricating spring covers; Easyon chains, both for pneumatic and truck tires; Non-Glare lens; lock chains; spark plugs; windshield cleaner; carbon clear; radiator cement; tire powder; fan belts and tire boots.

E. T. WRIGHT Co., Limited, Hamilton, Ontario, started in 1883, manufacturing mouse traps and bird cages, and was incorporated in 1913. Now this concern manufactures automobile funnels and measures and automobile oilers. Every detail of these articles is made in the Wright plant, corner of Cathcart, Kelly and Wellington Streets.

CANADIAN

Motor, Tractor and Implement Trade Journal

BUYERS DIRECTORY

This directory will help you with your buying and your planning. The advertisers listed here are thoroughly reliable and leaders in their respective fields. They are looking for live, wide-awake representatives. Study their advertisements carefully because they contain valuable information which will dovetail with your plans. We are glad to go to the trouble of arranging this list—to make it easy for you to select new lines. If it so happens that what you want is not here, write us, and we will tell you where to get it.

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Can. Fairbanks-Morse Co., Ltd., Montreal.
Can. General Electric Co., Ltd., Toronto.
Kales Stamping Co., Detroit, Mich.
Kinzinger Bruce Co., Niagara Falls, Ont.
No-Leak-O Piston Ring Co., Baltimore, Md.
Swedish Crucible Steel Co., of Can., Ltd., Windsor, Ont.
Northern Electric Co., Ltd., Montreal.
Shaw Auto Salvage Parts Supply Co., Toronto.

AUTOMOBILE CHAINS
Can. Fairbanks-Morse Co., Ltd., Montreal.
Can. General Electric Co., Ltd., Toronto.
Shaw Auto Salvage Parts Supply Co., Toronto.

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A. W. Harris Oil Co., Providence, R. I.
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BINDERS
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
Massey-Harris Co., Ltd., Toronto.

BELTING
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

BARN EQUIPMENT
Superior Barn Equipment Co., Fergus, Ont.

BATTERIES
Can. Fairbanks-Morse Co., Ltd., Montreal.
Can. General Electric Co., Ltd., Toronto.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

CARRIAGES
Cockshutt Plow Co., Brantford, Ont.

CREAM SEPARATORS
King Separator Co., Bridgeburg, Ont.
Massey-Harris Co., Ltd., Toronto.
R. A. Lister Co., (Canada) Ltd., Toronto.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.
Sharples Separator Co., Toronto.

CEMENT MIXERS
Can. Fairbanks-Morse, Ltd., Montreal.
Grace Motors, Ltd., Toronto.

CASTINGS
Joliette Steel Co., Joliette, P.Q.

CORN HARVESTERS
Cockshutt Plow Co., Brantford, Ont.

CULTIVATORS
Cockshutt Plow Co., Brantford, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
Massey-Harris Co., Ltd., Toronto.

DAIRY SUPPLIES
International Harvester Co., Ltd., Hamilton, Ont.
R. A. Lister Co., (Canada) Ltd., Toronto.

DISCS
Massey-Harris Co., Ltd., Toronto.

DITCHING MACHINES
Can. Fairbanks-Morse Co., Ltd., Montreal.

DRILLS
Cockshutt Plow Co., Brantford. Ont.
John Deere Mfg. Co., Welland, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
J. Fleury's Sons, Aurora, Ont.
Peter Hamilton Co., Ltd.. Peterborough, Ont.
Massey-Harris Co., Ltd., Toronto.

ENGINES
Can. Fairbanks-Morse Co., Ltd., Montreal.
Gilson Mfg. Co., Ltd., Guelph, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
R. A. Lister Co., (Canada) Ltd., Toronto.
Massey-Harris Co., Ltd.. Toronto.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.
Sharples Separator Co., Toronto.

ENSILAGE CUTTERS
Can. Fairbanks-Morse Co., Ltd., Montreal.
J. Fleury's Sons, Aurora. Ont.
Peter Hamilton Co., Ltd.. Peterborough, Ont.
Massey-Harris Co., Ltd.. Toronto.
Matthew Moody & Sons Co., Terrebonne, P.Q.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

FEED CUTTERS
Can. Fairbanks-Morse Co., Ltd., Montreal.
J. Fleury's Sons, Aurora, Ont.
Grace Motors, Ltd., Toronto.
Peter Hamilton Co., Ltd., Peterborough, Ont.
Massey-Harris Co., Ltd., Toronto.
Renfrew Machinery Co., Ltd., Renfrew, Ont.

FARM MACHINERY
Can. Fairbanks-Morse Co., Ltd., Montreal.
Cockshutt Plow Co., Brantford.
John Deere Mfg. Co., Welland, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
The Frost & Wood, Co., Ltd., Smith Falls, Ont.
R. A. Lister Co., (Canada) Ltd., Toronto.
Matthew Moody & Sons Co., Terrebonne, P.Q.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

FINANCIAL
The Commercial Credit Co. of Canada, Ltd., Toronto.

GRINDSTONES
S. Vessot & Co., Joliette, P.Q.

GRINDERS
Can. Fairbanks-Morse Co., Ltd., Montreal.
J. Fleury's Sons, Aurora, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
R. A. Lister Co., (Canada) Ltd., Toronto.
Massey-Harris Co., Ltd., Toronto.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.
S. Vessot & Co., Joliette, P.Q.

GASTINE TABLETS
Evans & Co., Ltd., Montreal.

GREASES
A. W. Harris Oil Co., Providence, R.I.
Prairie City Oil Co., Ltd., Winnipeg.

GARDEN TOOLS
Massey-Harris Co., Ltd., Toronto.

HARROWS
Cockshutt Plow Co., Brantford, Ont.
J. Fleury's Sons, Aurora, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.
The Matthew Moody & Sons Co., Terrebonne, Que.

HARDWARE
Massey-Harris Co., Ltd., Toronto.
Can. Fairbanks-Morse Co., Ltd., Montreal.

HAY CARRIERS
Massey-Harris Co. Ltd., Toronto.

HAY LOADERS
John Deere Mfg. Co., Welland, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.

HAY RAKES
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Peter Hamilton & Co., Ltd., Peterborough, Ont.

LIGHTNING SYSTEMS
Can. Fairbanks-Morse Co., Ltd., Montreal.
Can. General Electric Co., Ltd., Toronto.
Grace Motors, Ltd., Toronto.
R. A. Lister Co., (Canada) Ltd., Toronto.
Northern Electric Co., Ltd., Montreal.

LITTER CARRIERS
Superior Barn Equipment Co., Fergus, Ont.

MANURE SPREADERS
Cockshutt Plow Co., Brantford, Ont.
John Deere Mfg. Co., Welland, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
Massey-Harris Co., Ltd., Toronto.
The Matthew Moody & Sons Co., Terrebonne, Que.

MARINE FITTINGS
The Northern Electric Co., Ltd., Montreal.

MOWERS
Cockshutt Plow Co., Brantford, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.
Massey-Harris Co.. Ltd., Toronto.

MILKING MACHINES
R. A. Lister Co., (Canada) Ltd., Toronto.
Sharples Separator Co., Toronto.

ORCHARD TOOLS
Peter Hamilton Co., Ltd., Peterborough, Ont.

OILS
A. W. Harris Oil Co., Providence, R.I.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.
Prairie City Oil Co., Ltd., Winnipeg.

POWER ATTACHMENTS
Can. General Electric Co., Ltd., Toronto.
Grace Motors, Ltd., Toronto.

PLOWS
Cockshutt Plow Co., Brantford, Ont.
J. Fleury's Sons, Aurora. Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
Massey-Harris Co., Ltd., Toronto.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

POLICE AND FIRE ALARM EQUIPMENT
The Northern Electric Co., Ltd., Montreal.

POWER MACHINERY
Can. Fairbanks-Morse Co., Ltd., Montreal.
John Deere Mfg. Co., Welland, Ont.
Grace Motors. Ltd., Toronto.
Peter Hamilton Co., Ltd., Peterborough, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
Massey-Harris Co., Ltd., Toronto.

POWER AND LIGHT EQUIPMENT
The Northern Electric Co., Ltd., Montreal.

POWER SWITCHBOARDS
The Northern Electric Co., Ltd., Montreal.

POTATO MACHINERY
John Deere Mfg. Co., Welland, Ont.
Matthew Moody & Sons Co., Terrebonne, Que.
Cockshutt Plow Co., Brantford, Ont.

PULVERIZERS
Cockshutt Plow Co., Brantford, Ont.

PUMPS
Grace Motors, Ltd., Toronto.

PULPERS
Cockshutt Plow Co., Brantford, Ont.

RAKES
The Frost & Wood Co., Ltd., Smiths Falls, Ont.

REAPERS
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Massey-Harris Co., Ltd., Toronto.

ROLLERS
Cockshutt Plow Co., Brantford, Ont.
Massey-Harris Co., Ltd., Toronto.

ROAD MACHINERY
Grace Motors, Ltd., Toronto.

SAW MILL OUTFITS
J. Fleury's Sons, Aurora, Ont.
Massey-Harris Co., Ltd., Toronto.
Matthew Moody & Sons Co , Terrebonne, Que.

SAWS
Grace Motors, Ltd., Toronto.

SCUFFLERS
Cockshutt Plow Co., Brantford, Ont.

SILOS
Gilson Mfg. Co., Guelph, Ont.

SLEIGHS
Massey-Harris Co., Ltd., Toronto.
Cockshutt Plow Co., Brantford, Ont.

SILO FILLERS
Gilson Mfg. Co., Guelph, Ont.

SPREADERS, MANURE
Cockshutt Plow Co., Brantford, Ont.
John Deere Mfg. Co., Welland, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
Massey-Harris Co., Ltd., Toronto.

SAFES
J. & J. Taylor, Ltd., Toronto.

STABLE FITTINGS
Superior Barn Equipment Co., Fergus, Ont.

SPARK PLUGS
Canadian General Electric Co., Ltd., Toronto.
Champion Spark Plug Co., Windsor, Ont.
The Silvex Co., Bethlehem, Penn.

STANCHIONS
Superior Barn Equipment Co., Fergus, Ont.

SEEDERS
Massey-Harris Co., Ltd., Toronto.

TRACTORS
Chase Tractor Corporation, Ltd., Toronto.
Cleveland Tractor Co., Windsor, Ont.
Gilson Mfg. Co., Guelph, Ont.
Huber Mfg. Co., Marion, Ind.
International Harvester Co., Ltd., Hamilton, Ont.
Massey-Harris Co., Ltd., Toronto.
Advance Rumely Co., La Porte, Ind.

TRACTOR PLOWS
Cockshutt Plow Co., Brantford, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
Massey-Harris Co., Ltd., Toronto.

TRUCKS
Grace Motors, Ltd., Toronto.

TELEPHONE APPARATUS
The Northern Electric Co., Ltd., Montreal.

THRESHERS
Can. Fairbanks-Morse Co., Ltd., Montreal.
Massey-Harris Co., Ltd., Toronto.
R. A. Lister Co., Ltd., Toronto.
Matthew Moody & Sons Co., Terrebonne, Que.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

WHEELBARROWS
Cockshutt Plow Co., Brantford, Ont.
J. Fleury's Sons, Aurora, Ont.
Massey-Harris Co., Ltd., Toronto.

WAGONS
Cockshutt Plow Co., Brantford, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
Massey-Harris Co., Ltd., Toronto.

WIRES AND CABLES
The Northern Electric Co., Ltd., Montreal.

WEEDERS
Cockshutt Plow Co., Brantford, Ont.

ON OPTIMISM: Don't Howl Like Jeremiah!

ASIDE from being a mighty pleasant fellow to have around, the optimist has proved a valuable asset in another respect.

He's a true prophet.

In addition to contributing more than his share in making this world an unpleasant place to live in, the pessimist, that long-faced individual with hair on his liver, has annexed a title that befits him well.

He's a real honest-to-goodness fakir.

Recall for a moment the days of murky economic atmosphere last winter, when business began to go about transferring from a war-time to a peace-time basis.

Pessimists were plentiful then, and old Jeremiah's wailings were as a whisper compared with the yelps of the aforementioned calamity howler.

They saw goblins—every time they opened their eyes and ventured a look over a shoulder. And then they told the world about more goblins than they saw.

Every time they spoke of "the reconstruction period," they intoned the words just as they would in referring to "the bubonic plague," or "the Great Thirst."

PRICES were going to fall, they said. The business structure, inflated by war conditions, was going to collapse like a stricken Zeppelin. Demobilization would bring general unemployment. This unemployment would result in wide-spread unrest. And this unrest would cause Bolshevism to grow apace.

A logical sequence, like the steps of a doomed man on his way to the gallows!

"Better wait," they whispered huskily. "Risk as little as possible, and be prepared to get from under."

Friends, it was awful!

Or rather, it would have been, save for the activities of the optimists.

While the pessimists peered at goblins, the optimists looked squarely at the facts in the business situation.

THEIR idea was that, good or bad, the facts were the all-important realities—the only proper guides to future action.

They found in these facts nothing to cause apprehension of rapidly falling prices and business chaos.

The shelves of the world were bare.

Mr. Hoover, of the U. S., was calling for twice as much food for Europe as had been shipped in the last year of the war.

The making of munitions had ended, but there was dire need of resuming on a big scale the making of peace goods.

The purchasing power of the people was greater than ever before.

THESE and other facts caused the optimists to point to the "reconstruction period," as only a brief phase in the transition of business to greater activity, provided the public morale did not crumble under the misguided attack of the pessimists.

Consider now how time has verified the predictions of the optimists.

Business is moving smoothly along on a peace basis.

The fundamental conditions of the country are perfectly sound.

Reports of clearing houses and banks show that the volume of payments through banks is greater than a year ago, or at any other previous time, proving that people generally are buying freely.

INDUSTRIAL centres report that in spite of the rapid demobilization of soldiers, the demand for labor is increasing and that talk of a labor shortage has succeeded the talk of unemployment.

Wages, generally, are as high or higher than they were at the end of the war.

There is the expectation that, despite drought in some places, the crops will be greater than ever before and will sell for high prices.

Every symptom of business conditions indicates that the crisis in the reconstruction period has been passed and that all that is needed to prevent any serious "after effects" is continued courage, energy, optimism and confidence.

WE must quit thinking of the price levels that prevailed before the war.

They are gone never more to return, say the authorities on economic laws.

We are living in a new economic age.

We are operating on a new price level, the result of rapidly changing conditions during the past five years.

That level is the vital factor—the reality of business conditions that we must face squarely.

It is a high level, but there is no cause for pessimism in that.

"A general level of high prices," says a leading authority, "is neither better nor worse than a general level of low prices. The only thing that is harmful is *violent* fluctuation of prices. The important thing is to maintain a general level. *Gradual* adjustments injure no one. *Violent* adjustments injure everyone."

SINCE the high level of prices is here, and since it is so important that it be maintained only with gradual adjustments, it is useless to argue as to its causes. Yet the reasons for it are plain to anyone who will give the matter a little thought.

Goods cannot be manufactured and put on the market at lower prices unless the raw material and the cost of labor are first reduced to a great enough extent to amount to something.

Thus far the price of raw material has not gone down very much, and the cost of labor not at all. Instead, the wage scale tends upward in keeping with the cost of living.

RELATIVELY speaking, the price level is not high. Each of us is a seller as well as a buyer. For everything that we have to sell, there is a high price. We cannot sell high and buy low.

Wiser than arguing the whys and wherefores of the present price level, is facing the fact that it is a reality that is to be with us for several years and that it offers a real opportunity for every ambitious, aggressive person.

As an implement dealer, you have a special opportunity because of the stabilization of prices on the present level. You deal entirely with farmers. The farmer, more than anybody else, will continue to profit from the new conditions.

The commodities that he produces are in the greatest demand throughout the world, and are therefore bringing a price relatively higher than the price asked for the things that he buys. On the average, the cost of the equipment that the farmer buys in the operation of his farm, has gone up 80%, while the average selling price of the products of his farm has advanced approximately 125%, as in the case of wheat, and 300% or 400% as in the case of pork.

THE farmer has the money to buy. His bank book shows a far greater balance than it ever showed before. With average yields, his farm is paying him more than twice as much per acre as it paid back in the days before the war. He has had a taste of real prosperity and wants more. Conditions promise him prices next year practically as high as those he will get this year. He is going to be in business next year at the old stand. And he is going to need implements to help him—lots of them.

Don't overlook for a minute the opportunity that the farmer's purchasing ability, his good prospects, and his needs present to you.

Add to these factors the fact that prices are stabilized on an enduring level, and that you can stock up without fear of falling prices before your selling time comes.

Get ready with a stock of goods adequate to meet the needs of your trade.

Have a representative and well-arranged display in your store throughout the winter months.

TELL your farmers through your local papers that you are prepared to supply them with equipment for another big, profitable year of crop production, and invite them to come in to look over your new stock.

FARMER JOHN ASKS:

Q.—Can I save hired help by using a tractor?

* * *

A.—The possibility of saving hired help depends on the size of the farm, the type of farming and the opportunity of using the machine on various work about the farm. Nine out of fourteen farmers in one Western county reported an increase of 67 acres per man after purchasing a tractor. Out of 145 reports 47 stated they saved no help, but two-thirds of those interviewed were able to save hired help.

Nothing will overcome whatever buying timidity the farmer now has better than a straight-out manifestation of your own belief that there can be no reduction in the price of farm implements for next year, and that the farmer's prospects for highly profitable crop production make it decidedly unwise to try to do longer without implements that he needs.

"On your toes"—that's the motto that every business man should adopt for the future. Consistently followed, it means a sound and prosperous business. At least that's what some of these optimistic, busy fellows are saying—and their tip goes some considerable distance with yours truly.

This Fordson Has Tailor-Made Hood

IMPLEMENT dealers who handle Fordson tractors will be interested in this picture which shows an improvised cab erected on his machine by Robert Penny, a farmer of Balcarres, Sask. So often, tractors have no protection against the broiling hot sun in midsummer, nor against the cold breezes of spring and fall, nor against the dust storms and the clouds of dust thrown up from the drive wheels.

The cheap and lightly constructed home-made cab, originated by Mr. Penny, solves all these difficulties, although, as he explained, there are certain improvements to be made which are not shown in the picture. One of these is a glass wind-shield in front, and another, sides which may be let down by means of hinges to form a fender against the dust from the drive wheels, while in cold weather, they will snugly enclose the cab and give protection against the wind.

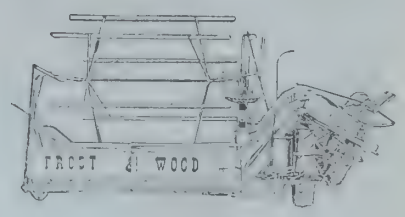
Furthermore, the roof should project out six inches on either side to give the cab a more finished appearance.

The measurements of this cab were taken for the benefit of Fordson owners all over Canada. The frame is three feet in width, which would make the proper width of the roof four feet. The frame is four feet long and the height of the uprights is four feet two inches. The frame is supported on two pieces of wood 2 x 4 inches in size. These are grooved to rest on the axle housing. The cab may be either attached by iron braces bolted to the transmission control, or, better still, by an iron bar across back of the engine, bolted where holes have been left for attaching tool boxes. All the frame is constructed of oak, the uprights at each corner measuring 2 x 2 inches in size. The frame is reinforced by angle iron. The frame is braced in the centre by pieces of wood measuring 2 x 2 which extend across the sides and front. It is necessary that the supporting base on one side be bevelled in order to clear the pulley.

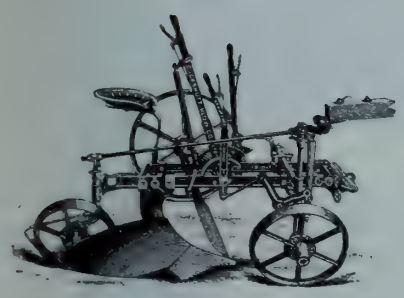
A piece of rubber belting or asbestos should be inserted between the wood and the gasoline tank, and the top and sides should be covered with galvanized iron and painted grey.

At the time this picture was taken, Mr. Penny was using his tractor to haul a split log drag in order to improve a private road leading to his premises. He has used the tractor for two years, and made rapid progress on stubble this spring with disc plows.

A DEALER'S PLATFORM

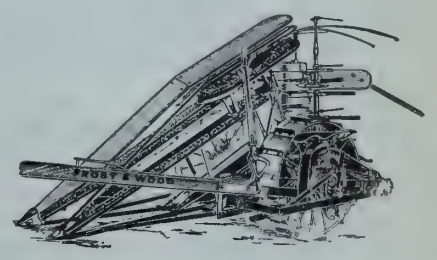


If you sat down and figured out exhaustively the features you really wanted in the Implement Line you were to handle—wouldn't it stack up like this:



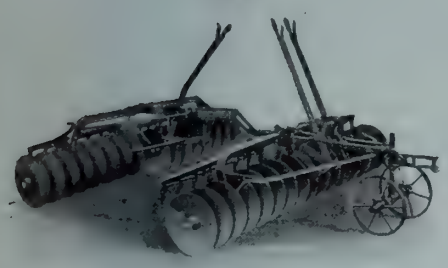
Prestige

Meaning goods with an established reputation, made in Canada, from a lifetime of experience of actual Canadian farm conditions and requirements. No theories. No experiments. PROVEN GOODS.



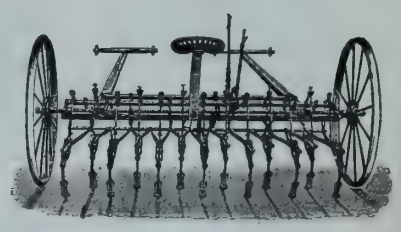
Value-to-Farmer

Meaning implements designed to suit the Canadian farmer. With the strength and design that only expert Canadian experience and workmanship can embody. Giving years of hard, useful Canadian service.



Completeness

Meaning a line that supplies practically every field requirement of the Canadian farmer. Every implement perfect. All made, guaranteed and backed by one big, resourceful Canadian organization.



Dealer Service

Meaning a line that has been consistently and thoroughly advertised for years in Canadian publications —backed by superior catalogue and folder service, by prompt repair delivery, and by the principle of the SQUARE DEAL first, last and all the time.

That's the COCKSHUTT FROST & WOOD LINE

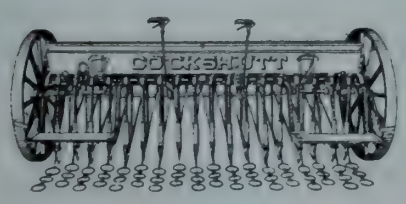
Hundreds of Successful Dealers will Endorse Every Word of This

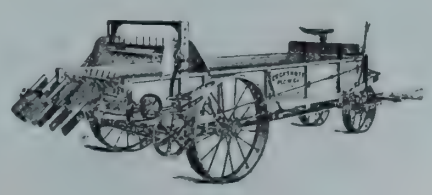
Send for our latest Dealer Proposition

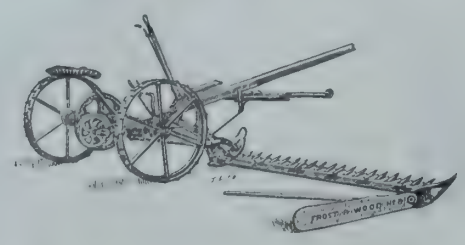
Cockshutt Plow Co.
Limited
BRANTFORD, ONTARIO

Sold in Eastern Ontario, Quebec and Maritime Provinces by

The Frost & Wood Co.
Limited
Montreal, SMITH'S FALLS, St John.







No-Agency Garage that Pays—and Why

By G. H. SALLANS

AN example of a "no-agency" garage that pays is found in the Franklin Garage, Saskatoon, Sask., which carries no line of cars whatever. They have adopted principle that an absolutely impartial service station cannot afford to specialize. This has been the guiding theory of the proprietors, S. A. Henderson and C. J. Brazier, ever since they opened in Saskatoon, in 1914, and has worked successfully.

When they started business, lack of funds was partially responsible for no agency being taken; and, when they found it an asset, they decided definitely to avoid any particular line. Their reasoning is that the fact of any special car being handled places a certain feeling of restraint on the customer. For instance, if they specialized on Cadillacs as agents, a man with a Chevrolet or Hudson would conclude that his car would not receive the same attention as the preferred make. With no agency, there is absolutely no ground for suspicion, of discrimination.

One of the cleanest-looking and most up-to-date garages in Saskatchewan.

Their business has had a phenomenal growth, until last spring they found a larger building necessary. The same site, an opportune one on Third Avenue, Saskatoon's second best street, was chosen for their new structure. The owners were also their own architects, and their efforts were so practical that other garage builders have copied ideas from them.

THE new building is a brick structure, with double walls and concrete floor, and fitted with modern machinery in every department. It is steam-heated throughout, and fire-proof, with additional precautions in the way of a fire-extinguisher behind every second car-space. Where the first garage was 30 by 60 feet, the new one is 50 by 140, with a 28 by 40 foot basement under the centre, for furnace, coal, etc. The coal wagon simply drives in on the floor and dumps the coal through a manhole, thus eliminating the old methods of window and chute. The office and repair rooms are provided with chimneys to set up stoves in exceptionally cold weather, the main garage not requiring so much heat.

Separate accommodation for ladies and gentlemen in the shape of lavatories and dressing-rooms, save travellers from having to go to an hotel to wash the dust of travel off and change their clothes. This point is especially important in the West.

The firm believes they have at last built an absolutely modern plant. Service is done with a desire to satisfy, and they believe they are doing the same. Accurate record is kept of every transaction in the shop by the card system: the work card, storage tag, and battery card. The repair card is 6 by 9 inches, and shows nature of work to be done and by what mechanic, date, hours, material used, and has a line for the proprietor's O.K. The battery card is perforated into three sections, each containing all particulars, one going to the battery room, one to the office, and one to the customer. The storage tag shows dates, supplies, charges if any on repair or tire tickets. On the back of the battery card is the rental agreement.

ENTERING from Third Avenue through the 12-foot doorway with a 12 by 6 show window on either side, you pass through the storage room to the repair room, and thence to the battery station at the rear in a separate building. Accommodation is provided for storing 54 cars, each space being marked off. In emergency, an additional three can be taken in, and nine in the repair room. In the main garage is an airline with four extensions, to reach any car; outside is another airline, and three in the repair room.

The running-in block is one of the firm's own make, and does away with all guesswork, clamps making it to fit any motor with mathematical precision. Each motor is run for five hours on the city power after overhauling, and is then re-tightened. Estimates will be given on all job work in advance, but only backed with guarantee in Ford work.

This is not the least important feature of the system. When a car is brought in, the foreman makes a list of repairs needed, with the cost of each, and the customer is then in no danger of a disagreeable surprise when he pays the bill. If extra defects are found in the course of repairs, these are, of course, added. Mr. Henderson holds that 90 per cent. of dissatisfaction is caused by unexpected steepness in charges.

THIS system also gives employees an incentive to work, with proportionate efficiency increase. Each workman is paid on the percentage basis, and a friendly rivalry develops for who shall turn out the most and best work. If faulty workmanship is evident, the mechanic knows he will have to go over it with no additional remuneration.

Burnishing is a better word in the repair shop than the nick-name burning-in, for that is really the method. Power is supplied from the city wires at a cost of about $15 a month. Sufficient power is supplied to burnish all bearings at the one time, affecting a great saving in time.

In the process, the main bearings are first babbited, then a long reamer, reaming and aligning at the one time, is used to get the bearings to nearly the finish size. In the Ford Engine the big end connecting rod bearings are the same diameter as the main crank-shaft bearings, and the same reamer can be used to size up the connecting-rod bearings as well. In this the pistons and connecting rods are held in the cylinder block, while the connecting rod bearings are held in line with the crank-shaft bearings. A liberal estimate of the saving effected by this would be ten hours of a mechanic's time, and in these days a mechanic who can do a good job of scraping main bearings is indeed a rarity. With the block the time for a motor is about an hour.

WHILE no line of cars is handled, a full stock of accessories is carried, the shop in front serving also as office. The latter requires but small space, and system is worked down to the last word in simplicity, importance of which was taught in the pioneer days.

S. A. Henderson worked out the service station system, basing it on experience of many years in work of this kind. It is simple, yet it keeps the company informed of just what has been done on each car, what may be expected, and is a running record of efficiency not always obtained by those who strive for it. Its efficiency will be apparent from the fact that it accounts for well over 600 jobs a month, 8,000 in the past year, or triple that of 1917.

The station is divided into two sections, receiving and delivering, each in charge of their own foreman. Being relieved of all details and manifold duties of receiving and inspecting, the shop foreman can give his undivided attention to shop work. In all service repairs, no matter how small, the regulation work card is used.

Often in going over a car, the practiced eye of the receiving foreman will detect unsuspected faults which can be repaired at small cost if found in time. A job number is entered and follows the car until it leaves the garage.

ALL material used by the workman has to be secured on written requisition signed by the foreman, and in this way an absolute check is kept on every workman, leaving no evasion for any possible comeback, since the workman's number appears on the card and the requisition. The latter is in two parts, the original being left in the stockroom, while the duplicate goes in an envelope into the car along with the work card.

Opposite all the items on the repair card having to do with greasing or oiling, there are numbers. This is a little time-saving device for entering into the book. Numbers are entered to distinguish from ordinary repairs and saves much writing, yet it is just as effective, if he at any time refers to the work-card file for information.

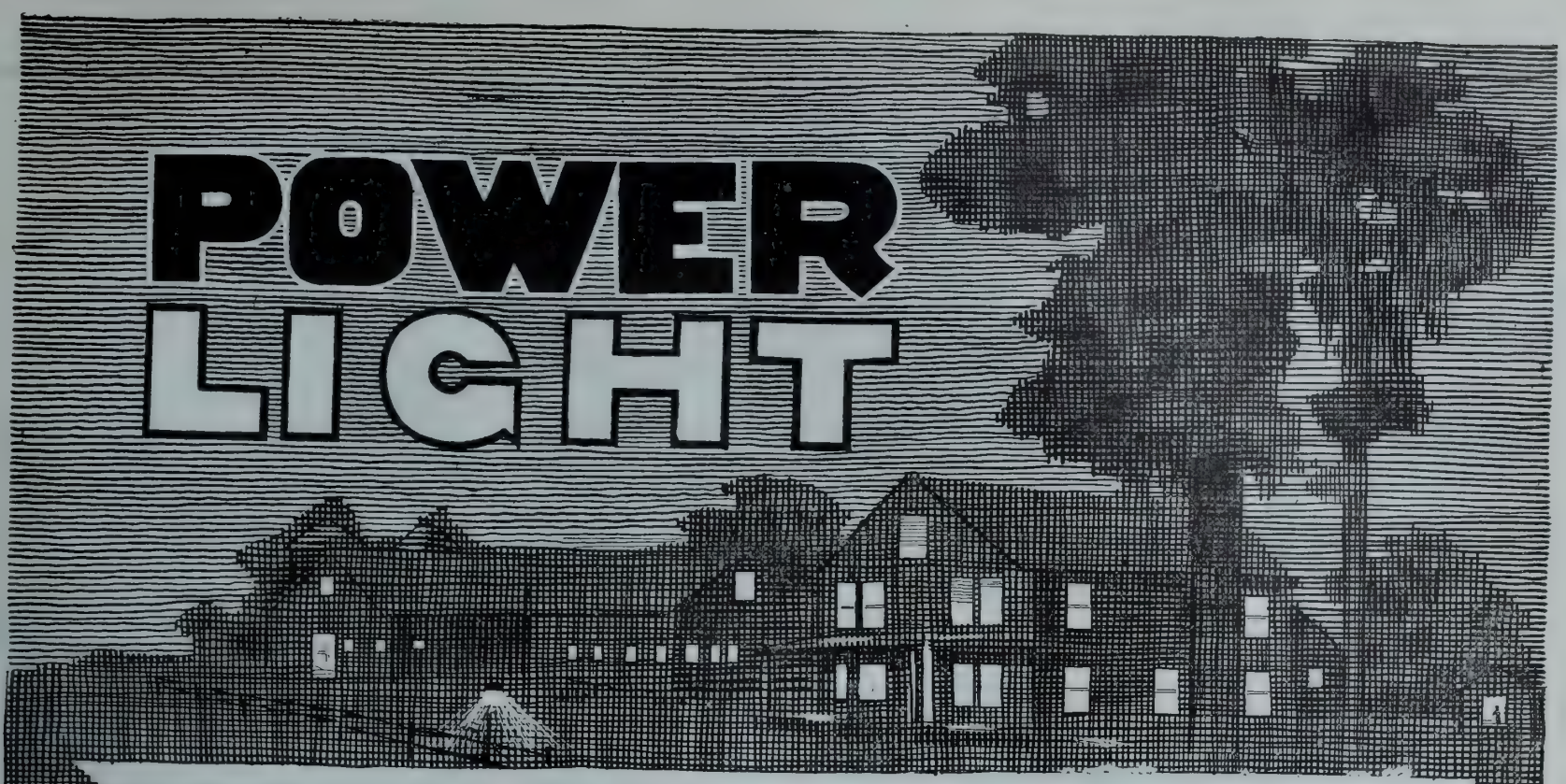
When the work on the repair floor is finished, the foreman goes over it carefully and puts his O.K. in the column reserved for him. His inspection must cover thermostat, oil pressure, choker lever, clutch, foot-brake and windshield, whether work has been specified or not.

When the car leaves the shop, the work card is filled

GIMME ONE OF YOUR CANS O' TIRE PUTTY
YES, SIR AN' HOW ABOUT AN EXTRA TIRE. THEY'RE ALWAYS HANDY TO HAVE ALONG
FINE IDEA! GLAD YOU REMINDED ME
MAYBE YOU'D WANT SOME PATCHES FOR YOUR OLD TUBES
WELL THERES $88.67 GONE BUT IT'S WELL SPENT
DING! DING!
CASH REGISTER

—By. Wm. Casey.

S. A. Henderson and C. J. Brazier don't let any sales get away from them.



Dealers! Sell Farm Power and Light And Make Profitable Sales

Act now. The possibility of many sales at a good profit are sure. Farmers are installing Northern Electric Power and Light Systems because they recognize that they reduce the cost of labor and save time on the farm.

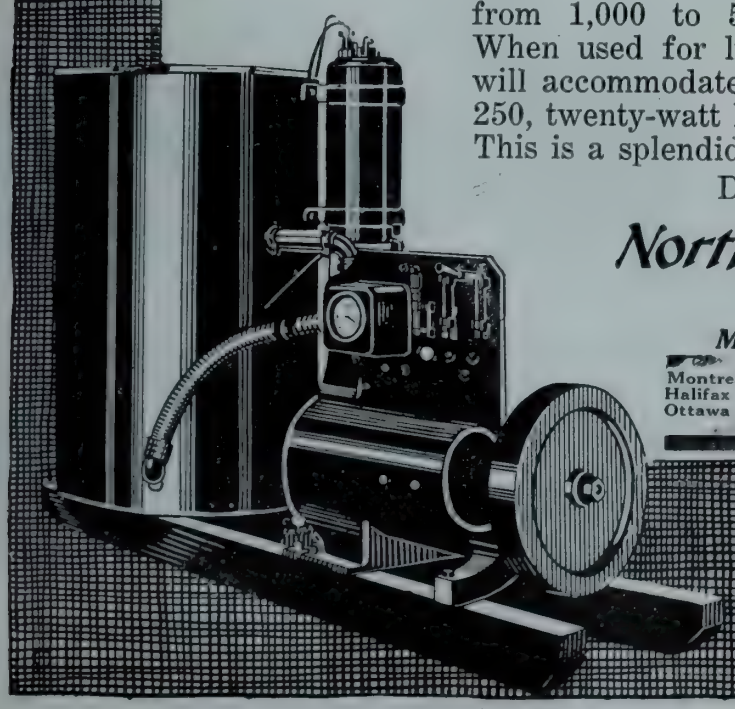
The Women and Children of the Farm are delighted with the better light, the water supply, and the many helps in the work of the homes.

Now is the time for you to secure the special agency in your territory, for the

Northern Electric
Power and Light System

The name "Northern" has won the highest reputation in the electrical field from coast to coast.

Northern Electric Power & Light plants are made in many sizes, but only one quality—the Best!



They have a power capacity from 1,000 to 5,000 watts. When used for lighting they will accommodate from 50 to 250, twenty-watt lamps. This is a splendid proposition for wide-awake, business-getting dealers. That's the only kind we want. So, protect your agency in your territory. Clip this coupon, fill it out and mail it to-day.

Don't delay. NOW is the time.

Northern Electric Company
LIMITED

Makers of the Nation's Telephones

Montreal Halifax Ottawa Toronto London Winnipeg Vancouver Regina Calgary Edmonton

DI

Coupon

Northern Electric Company
LIMITED
(address nearest house)

Send me full information for your Sales Agency proposition.

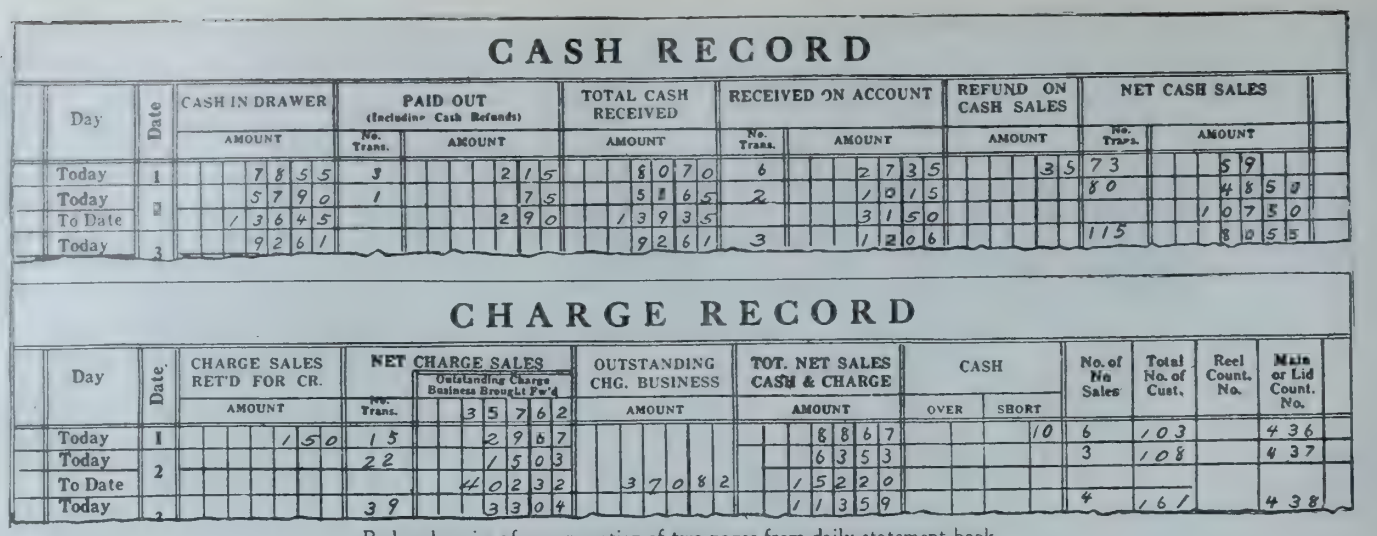
Name .....

Address .....

City or Town..... Prov.....

in the office. Workman's time cards are stamped by an automatic time clock with the beginning, finishing and elapsed time of each job, and bear indisputable evidence of time on each job.

A table of two inch planks occupies nearly the whole right side of the battery storage room, 50 by 40 feet. This table is against the wall, about 2 feet 6 inches high. At the front, in the light from the window, is the switchboard to which comes the alternating current from the city wires. Proper switches, measuring instruments, and fuses are mounted on this board for transference of the current to the 220 volt, 60 cycle, single phase Stahl Rectifier, which is mounted on a heavy base in the centre of the room. This charging set is controlled by its own switchboard. Wires from this witchboard run in conduits under the floor to four regulating rheostats, at equal intervals along the wall above the charging table, and wires extend to the batteries to be charged.



CASH RECORD

Day	Date	CASH IN DRAWER (Amount)	PAID OUT (Including Cash Refunds) No. Trans.	PAID OUT (Amount)	TOTAL CASH RECEIVED (Amount)	RECEIVED ON ACCOUNT No. Trans.	RECEIVED ON ACCOUNT (Amount)	REFUND ON CASH SALES (Amount)	NET CASH SALES No. Trans.	NET CASH SALES (Amount)
Today	1	78.55	3	2.15	80.70	6	27.35	3.55	73	59
Today	2	57.90	1	7.50	58.65	2	10.15		80	48.50
To Date		136.45		29.00	139.35		31.50			107.50
Today	3	92.61			92.61	3	12.06		115	80.55

CHARGE RECORD

Day	Date	CHARGE SALES RET'D FOR CR. (Amount)	NET CHARGE SALES No. Trans.	NET CHARGE SALES (Amount)	Outstanding Charge Business Brought For'd	OUTSTANDING CHG. BUSINESS (Amount)	TOT. NET SALES CASH & CHARGE (Amount)	CASH OVER	CASH SHORT	No. of Net Sales	Total No. of Cust.	Reel Count. No.	Main or Lid Count. No.
Today	1	1.50	15	29.67	35.02	370.82	886.70		.10	6	103		436
Today	2		22	15.03			635.3			3	108		437
To Date				44.02	32.32		1522.20						
Today	3		39	33.04			1135.9			4	161		438

Reduced copies of upper portion of two pages from daily statement book

By this printed record from the daily statement book, a manager of a garage can tell at any moment how his business stands. This is detailed—but very simple.

FOR each rheostat is a small shelf, on which the operator may lay his hydrometers and other paraphernalia. These shelves keep the delicate instrument off the charging table, where they would meet disaster.

To the right of the charging table is an old screw copying press, which is used to flatten out and straighten bent lead battery plates, and serves the purpose admirably. At the rear is a sink for washing out batteries and plates, a work-bench and a gas stove with a sheet iron over it, and connected to the chimney by pipes, for melting the sealing composition in the tops of batteries. A notable feature of the work-bench is a marble slab 18 inches by 4 feet, giving a clean surface to work on.

To the side of the stove is the lead burning bench, with raised shelf for holding tools, with the two gas-tanks at the opposite end, where they are within easy reach. On the other side of the tanks is a work table for placing tools during lead-burning operations.

Shelves divided into pigeonholes occupy most of the left wall, for holding battery plates, jars, boxes, battery supplies and batteries of all kinds. A ledge a foot wide extends at a height of 3½ feet, making a handy assembling shelf when picking out parts from the shelf above. The shelves are heated in winter by a stove at one end, and ventilation for gases is secured through doors and windows at both ends.

Work is done on cash terms, except where the customer is well known as to credit rating.

THE firm's system of book-keeping is based on, and follows almost in its entirety, that set forth by the National Cash Register. The machine used is the register No. 855-E-L, the mechanical marvel that has been worked out for the uses of garages alone. It is the highest form of office system in this business that could be obtained, with 45 keys, 1 cent to $99.99; 6 clerks' keys and three special keys, total adder, receipt and detail strip printer, and special lever numbering device.

Every customer is provided with a receipt, 200 per cent. faster than it could be done by hand. An accurate account is kept of each clerk's work, for each punches his own key, and his letter appears on the strip printer. The nature of every transaction is kept. For instance, if the transaction is charge, for $3.00, and is for one gallon of gasoline, one quart of oil, and repair work, say vulcanizing, and is put through by clerk A, then the receipt reads:

Franklin Garage.
Ch. A. 3.00. Vul. Qu. 1
Thank you. Call again.

The legend at the bottom or top can be as the owner wishes. On the back is his business card. But no matter what the nature of a transaction, its exact nature is printed. The detail for office reference records each entry in the order in which it is made, whether cash or charge sales, money received on accounts, or petty paid-outs.

THUS, at the end of each day, Mr. Henderson can, if he so desires, review the day's business in half an hour or less. He knows how much gasoline and oil he has sold, and can easily find out how much is still in the tank, how much work and of what nature each workman has done, how much money has been taken in and how much paid out. He can tell almost at a glance how many customers have been served and in what manner.

Most of the mathematics have already been done when it comes to entering the business, and book-keeping resolves itself mainly into a question of copying and neatness. The double page used is divided into columns, as shown in the figure. It will be noticed that in the cross-section there are two lines for each date, one marked "to-day," and the lower one "to date." By this means the totals are carried forward every night with a few minutes' work, and at the end of the month he knows exactly where he stands and how much business he has done. One clerk looks after all the firm's books, with the assistance of Mr. Henderson, while balancing the register in the evening, this occupying less than half an hour. If it will not baalnce with the sum shown on the total levers, then he has only to refer to his detail strip to find where the fault lies. In the whole system there are but two things to look after, the cash register and the one book of cash and sales and purchase records.

While both owners are hard workers, it is not this alone that has won them success. There is in everything they do and have a suggestion of ingenuity that cannot fail to be noticed. The fact that they have engineered the new project without paid advice shows how well they are on the job.

West Buying Headers

By E. H. SCOTT

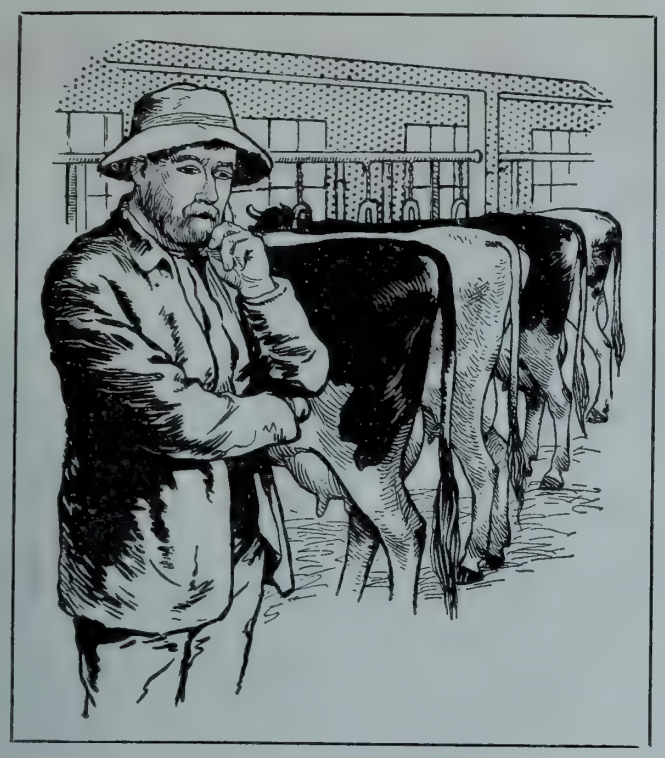
MANY Western Canadian implement dealers are agreed that the present season has been an exceptionally poor one for the sale of farm machinery. There are several controibuting reasons for this, perhaps the most important of which is the partial crop failure as the result of the drouth in a large area of Western Saskatchewan and Alberta. Even before this situation threatened, however, the farmers, according to various dealers, were led to believe that important traiff changes were pending which would mean an all-round reduction in farm machinery. They are slow in getting over this idea, and many in a position to buy are still waiting for prices to come down. A farmer came into the office of E. J. Ramsey, implement dealer at Red Deer, the other day for repairs for a mower he had owned for fifteen years. He had intended to purchase a new mower this year, he said, but was told that prices could not be maintained at present levels, and he had decided to make the old one do for another year. His case is typical of other farmers throughout the country.

Another contributing cause for a slack season, as applied to the tractor business, is that horse prices have taken a very serious slump, and can be purchased t very low figures. Farmers do not seem to figure that it takes just as much to feed a horse, no matter what its value. A cheap horse eats as much as a dear one.

IN many parts of Alberta a horse can be purchased this year about as cheaply as a cow. The implement firm of Francoeur Brothers in Camrose, Alta., purchased a team of light horses the other day for $200, which would cost from $300 to $400 a year or two ago. There are many farmers in that vicinity who have from 50 to 60 horses running loose, some of them going on in years of age that have never yet felt a collar. The impression prevailed early in the war that as a result of the vast number of horses that were being purchased on this continent for shipment to Europe that there would be marked advance in price coincident with a heavy demand. This situation had not materialized.

One result of the unusual crop conditions in southern Saskatchewan and Alberta is the sale of a very considerable number of headers with which to harvest the short crop. Hitherto the sale of headers has been very limited in Western Canada, but a salesman for the International Harvester Company sent in an order for four car-loads, while the representative of MOTOR TRACTOR AND IMPLEMENT TRADE JOURNAL was at Maple Creek early in July. These headers sell retail at about $400 apiece, where a binder retails for $268 in this section. It is customary for two or three farmers to combine for the purchase of a header. These machines have a 12-foot cut and can handle forty acres of crop a day. A wagon with a high, tight box is operated alongside to receive the heads which are stacked for a week and then threshed. This is the only way to save what crop there is in the drouth district, because the grain is so short that it is impossible to bind it. Those who have used headers say they can be used in any season when the grain is of uniform heaight, but are more difficult to operate when the opposite is the case.

Here are two pictures taken by the M.T.I. representative, E. H. Scott, on the farm of John Peacock, 15 miles southwest of Leader, Sask. The top picture shows Mr. Peacock operating a Sawyer-Massey 11-22 tractor, which is hauling three 14-inch breaking plows. This machine uses kerosene and breaks eight acres a day. A special feature as shown prominently in the photograph is the steering device at the front of the tractor with guiding wheel in the furrow to keep the machine running straight automatically. The device is raised by a lever in turning corners. The six horses in the picture beneath are working on stubble. They are pulling only two-12 inch plows and a section of harrows in the rear. They can cover from three to four acres in a day.

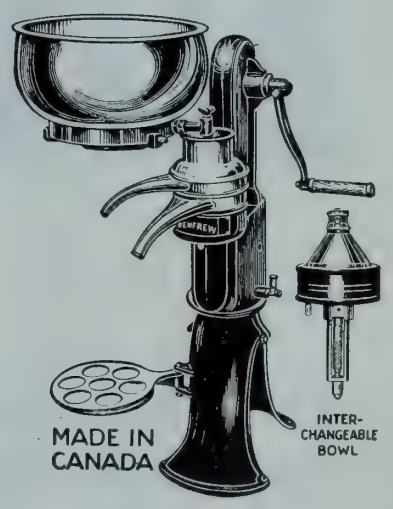


Tell the farmer not to worry about increased capacity

You can solve his problem with a Renfrew Separator

With the Renfrew's exclusive interchangeable capacity feature the farmer can feel free to add to his dairy herd without the worry and expense of providing a new separator

Renfrew CREAM SEPARATOR



THE MACHINE WITH INTERCHANGEABLE CAPACITY

When he wants to increase capacity all he has to do is to order a bowl of the size he needs—450, 650, 800 or 1000 lbs.—with attachments; we make an allowance for return to us of his smaller equipment. The cost of making this change is very moderate.

All Renfrew machines have the same size of frame. It is heavy enough for the largest capacity. Thus he could change his machine from 450 lbs. capacity to 1000 lbs. if desired, without increasing the strain on the machine.

Renfrew interchangeable capacity does not mean trying to make one size of bowl skim different capacities.

If you order the proper size of bowl for your new requirements you will have a machine that does your work just as thoroughly as if you had secured an entirely new machine.

The Renfrew's Close Skimming Record Is Unsurpassed---And It Is Proven By Government Tests

In addition you get firmer, better butter, owing to the exclusive wide open bowl with curved wings.

Write for booklet fully describing the Renfrew's interchangeable capacity and self-oiling features, its low supply can, easy-turning and many other points of merit.

A Good Paying Line for Dealers. Write for Agency Proposition and Full Particulars

The Renfrew Machinery Co., Limited, Head Office and Works **Renfrew, Ont.**

Agencies almost everywhere in Canada. **Eastern Branch, Sussex, N.B.**

Repeat our claims to the last letter! "Happy Farmer" Service never fails to back them up.

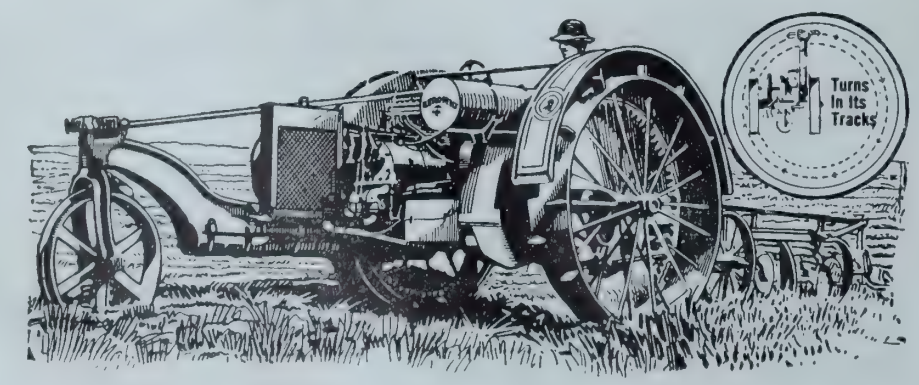
It has a remarkable kerosene motor designed to permit quick passage of the fuel mixture into the cylinders without condensation. This engine gets the last kick of power out of cheap coal oil.

HAPPY FARM

Leads the Field in L

In a hard test at Columbus, Ohio, this tractor established the record for low fuel consumption and low cost of plowing. Its nearest competitor was 21% higher. Standing alone the results of this test would mean little. So frequently are these performance records repeated, however, that they may be accepted as standard.

The simple transmission gears and differential gears, run-

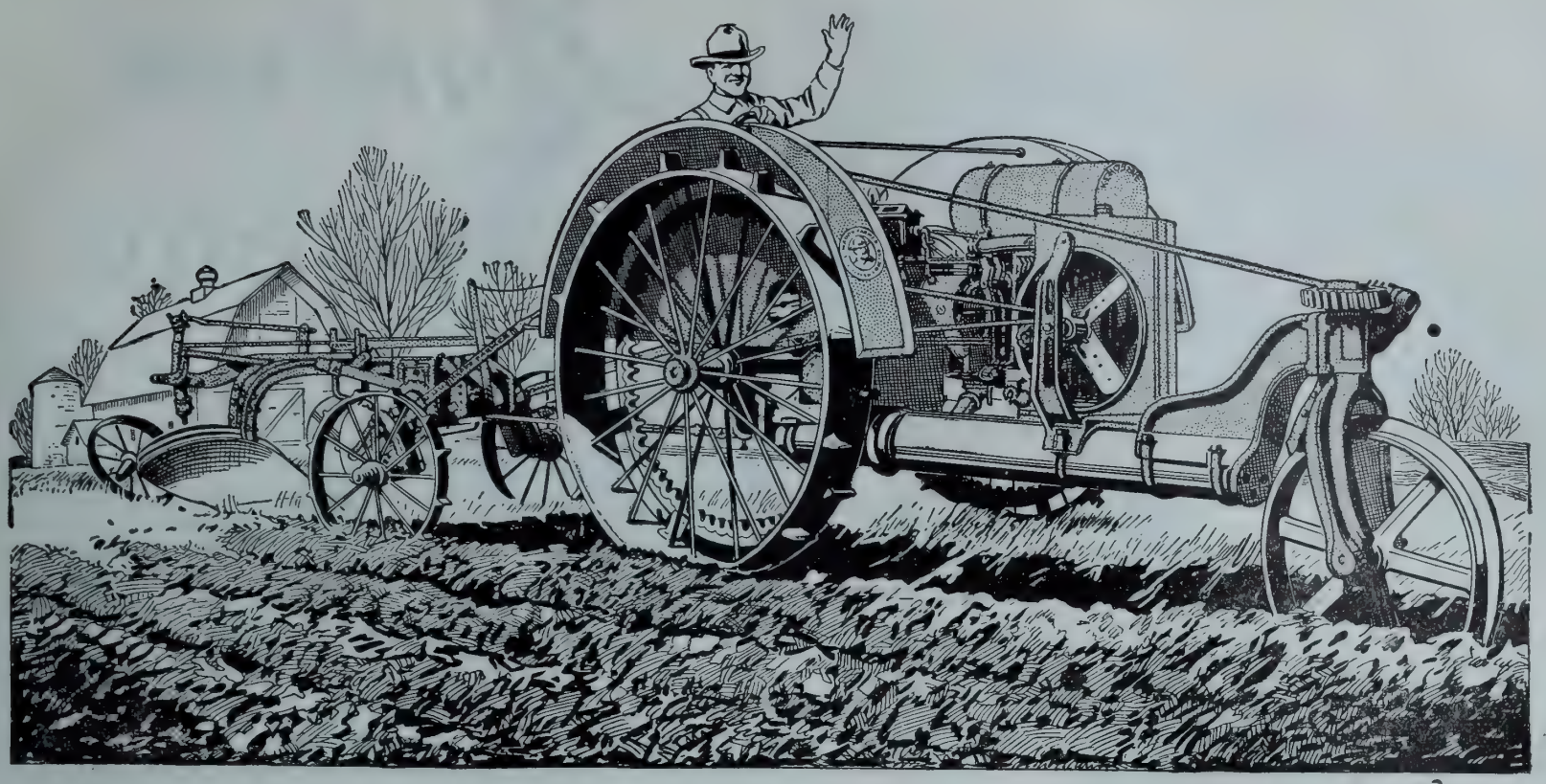


MR. DEALER: Ask t

Why pay the price of a
it will do it at the low
advertised tractor. Sa

The Renfrew Mac

Agencies Almost Everywhere i



ER TRACTOR

w Cost of Plowing

ning in a bath of oil, waste least power between motor and final drive. This means greater power on the draw-bar. Still further saving of power is assured by light weight.

These typical features of efficiency and economy mean exceptional horsepower on the draw-bar in relation to the size of the engine. It means more horsepower for your money.

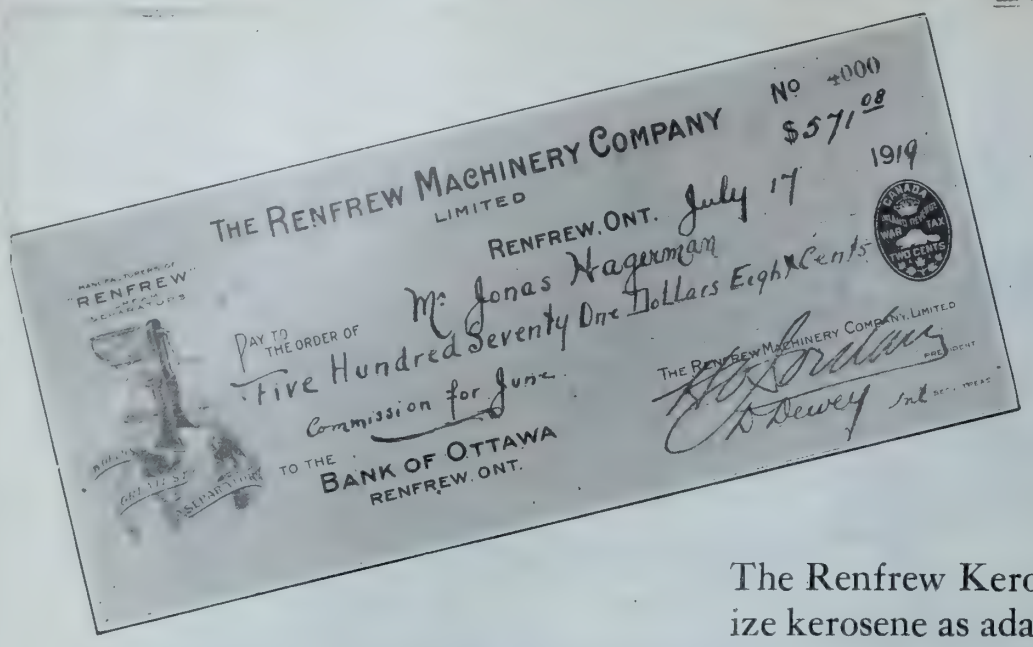
With only 3,700 lbs. weight it develops 2,000 lbs. draw-bar pull—pulls three 14-inch plow bottoms at an average depth of 8 inches.

armer this question—

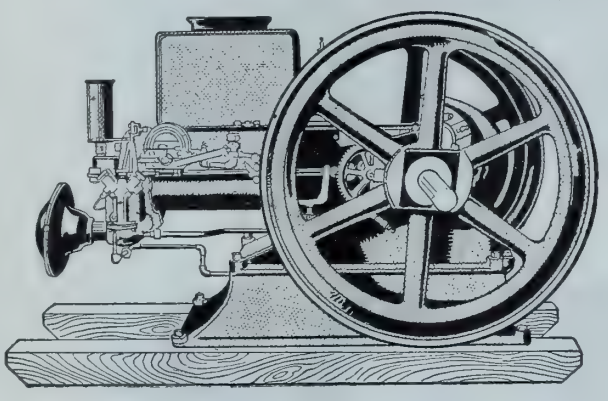
r, cumbersome tractor when the light-weight Happy Farmers will do the work? And cost and low maintenance cost of a light tractor. The "Happy Farmer" is a widely me quick and easy with a liberal commission. Write for agency proposition.

nery Co., Limited, HEAD OFFICE AND WORKS: **Renfrew, Ont.**

nada :-: *Eastern Branch - - Sussex, N. B.*



Renfrew Kerosene Engine



The Renfrew Kerosene Engine does more than merely utilize kerosene as adapted engines do; it gets maximum power out of cheap coal oil and makes it pay you handsomely. The Renfrew is the true Kerosene engine, this means top-notch efficiency.

The Renfrew starts with least amount of gasoline; in quickest time you change over to coal oil. Then it runs smoothly and evenly; couldn't do otherwise with her extra big fly wheels, perfect alignments always, machine cut gears, and extra sensitive governor.

Its special oscillating magneto and ignitor provide the good fat spark that kerosene must have; the extra big hopper and water jacket take more than usual care of the cooling. This engine is built especially for kerosene, and is sure to give full and complete satisfaction.

May We Send You Our Agency Proposition?
Write for full particulars and catalogue.

The *Renfrew* Truck Scale

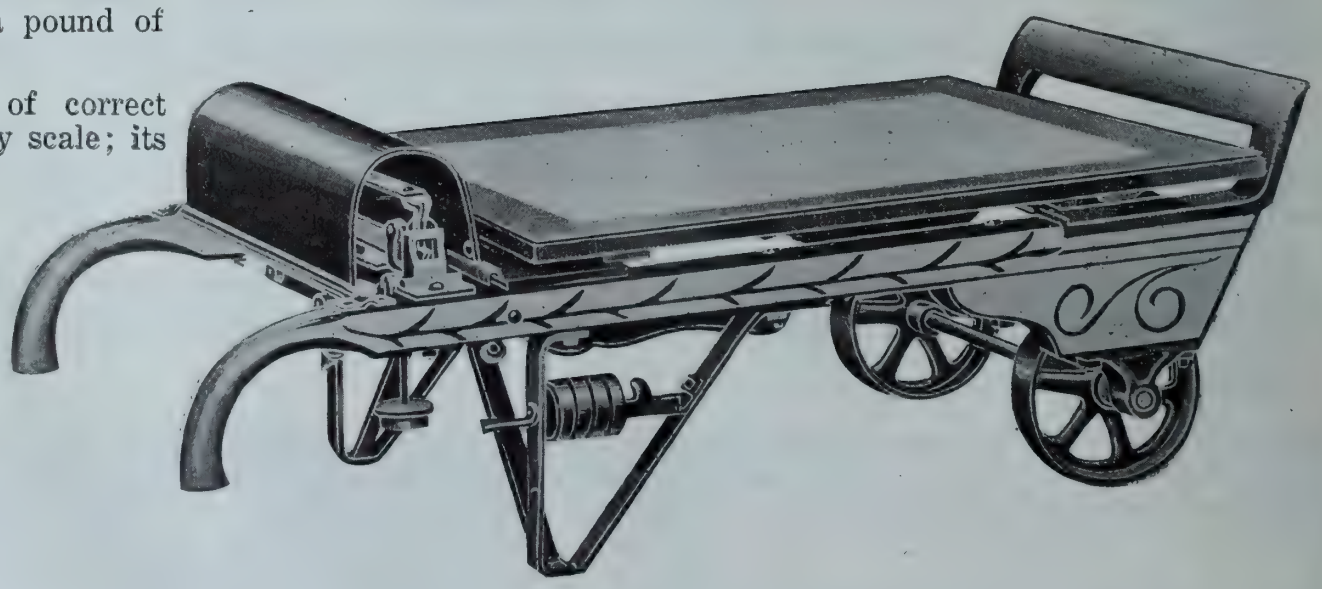
The farmer can take this light, handy truck scale to the place where he wants to do his weighing.

The handiest scale ever invented. Weighs anything from a pound of butter to a cow.

Government Certificate of correct weights comes with every scale; its accuracy is unquestioned.

Simple in construction and there's nothing to get out of order.

Every dealer in Canada should handle this live seller. Our well-equipped factory can keep you well supplied with stock for quick turnovers.



The Renfrew Machinery Co., Limited

Head Office and Works: Renfrew, Ont.

Eastern Branch: Sussex, N.B.

Make Chase Tractor in Canada

CANADA has a new tractor industry—backed by one of the strongest combinations which was engaged in munition work. A charter has been granted to the Chase Tractors Corporation, Limited, of Canada. This company will manufacture the Chase Tractor, which has been marketed for years so successfully by the Chase Motor Truck Co., of Syracuse, N.Y.

The president of the Chase Tractors Corporation, Limited, is R. J. Cluff, for many years one of the outstanding manufacturers of Ontario, and head of the Cluff Ammunition Company, which achieved a notable success in the manufacture of shell forgings for the Imperial Munitions Board.

Like many other concerns which engaged in the manufacture of munitions on a large scale, the Cluff Ammunition Company at the close of the war found themselves with a large and splendidly equipped plant, which they were not disposed to let stand idle. In seeking for a commercial line with which to keep their plant going and to give employment to their large staff of skilled workmen, it was decided that the tractor business offered the greatest possibilities, particularly as the opportunity to acquire the business of the old-established and successful Chase tractor presented itself.

The negotiations were completed some weeks ago, and the Chase Tractors Corporations, Limited, was formed to carry on the business. The new company are now the sole owners of the patterns, dies, jigs, templets, and in fact, everything that enters into the manufacture of the Chase Tractor. The manufacturing operations will be carried on at the company's big plant at the foot of Atlantic Avenue. This plant, which covers approximately two acres of ground, is now being remodelled to meet the needs of the tractor business. The company expect to be producing tractors within sixty days, and are making plans for a large production.

The head office and works of the Chase Tractors Corporation, Limited, will be at 28 Atlantic Avenue, Toronto. The authorized capital is $2,000,000.

R. J. CLUFF.

M. E. FORBES

The officers of the company, who were elected at a meeting of the directors a few days ago, are as follows: R. J. Cluff, President; W. J. Cluff, director; J. W. Norcross, director; Jas. Whalen, director; Roy M. Wolvin, director; M. E. Forbes, general manager; F. R. Bartlett, comptroller and treasurer.

The active management of the company will be in able and experienced hands. M. E. Forbes, who has been chosen general manager, was for several years a prominent executive of Deere & Co., of Moline, Ill., joining their organization in 1911. For some time he managed the plant of the John Deere Manufacturing Company, Limited, of Welland, Ont., and later for four years was general manager of the Syracuse Chilled Plow Works, of Syracuse, N.Y., both subsidiaries of the great Deere organization. For the past year Mr. Forbes has been vice-president and general manager of the Dayton Ohio Production Company. Mr. Forbes is very enthusiastic about the future of the light tractor in Canada.

Mr. Forbes will have the benefit of the wisdom and experience of a strong board of directors. Headed by R. J. Cluff, partner of Cluff Brothers, and vice-president of the Cluff Ammunition Company, as president, the directors are men of large affairs, who have been conspicuously successful in the enterprises with which they are especially identified; W. J. Cluff, president and managing-director of Canada Pipe & Steel Company, Limited, and president of National Electro Products Company, Limited; J. W. Norcross is widely known as the president and managing director of the Canada Steamship Lines, Limited; James Whalen is head of the big Whalen Pulp Mills at the Pacific Coast and Roy Wolvin is the directing head of extensive transportation interests.

The Chase Tractor is stated to be conservatively rated. It weighs 4,700 pounds.

The Chase will be shown at the forthcoming Canadian National Exhibition at Toronto.

NEWS — OF THE TRADE FOR THE TRADE

ONTARIO

CHATHAM.— Chatham has decided to motorize its fire equipment.

TORONTO.—The Ross Garage in King Street was gutted by fire recently, $10,000 damage being done.

OSHAWA.—The Oshawa Brass Foundry is giving a garage service, in repairs, gas, oil and accessories.

CHATHAM.—A. I. Jacques has enlarged his harness shop, and installed a tire repair and vulcanizing department.

HAMILTON. — William McMillan, formerly an I. H. C. salesman in this territory, has been promoted to blockman.

OSHAWA.—About a mile of new sidings will be built to furnish shipping facilities for the new General Motors plant.

OSHAWA.—The Council has taken under consideration the purpose of a second-hand ditching machine, for $5,000.

HIGHGATE.—Geo. Hy. Hulse has opened a new garage, known as the Highgate Garage, in the Cement Block Building.

BRIDGEBURG. — The Allis-Chalmers Canadian plant strike was settled July 7, after the men had been out about a month.

KITCHENER.—J. A. Martin, of the Consolidated Rubebr Co., Montreal, has been appointed manager of the Dominion Tire Co.

CARP.—E. J. Desjardins is extending his garage business, and fitting up the huge boiler room of the rolling mill to house cars.

WINGHAM.—A. M. Crawford is constructing a large garage on the old National Hotel property. It will be cement built.

ORILLIA.—The Overland sales room in West street were severely damaged in the fire which recently destroyed the Orillia House stables.

KITCHENER.—The Berlin Gasoline Engine and Thresher Co., Limited, has changed its name to the Truck Engine and Tool Co., Limited.

HAMILTON.—The Beaver Motor Truck Co., capitalized at $250,000, has purchased a large property here, and commenced operation early in August.

WINGHAM.—John S. Hawk has opened a McLaughlin and Chevrolet garage in William Gannett's old stand, Josephine street.

WINDSOR.—The Auto Specialty Manufacturing Co., of Canada, is erecting a new brick and concrete factory here, at a cost of $50,000.

LONDON.—N. B. Agnew, formerly I. H. C. blockman in this territory, is now holding down the job of assistant to the manager at Hamilton.

BEAVERTON.—A. B. Marks has opened a new garage. He is handling the Maxwell car, and also doing repair work and stocking accessories.

ALVISTON.—A local dealer reports selling a car to a Brooks farmer, who uses it to go after his cows. He's trying to sell him a milking machine now.

PETERBORO.—The Banks Garage has just installed the most complete free air system known, and announces that a pressure of 125 pounds will be maintained.

OSHAWA.—A company, headed by a local business man, with an initial capital of $100,000, is being organized to commence the manufacture of tires in the fall.

TRENTON.—Acer and Macnab have been awarded a contract by the General Motors Corporation of Oshawa, for the erection of fifteen houses for their employees.

NAPANEE.—J. M. Graham has opened an Independent Garage, opposite the Gibbard furniture factory, and is specializing on repairing and painting of all makes.

BETHEL.—The first milking machine bought in this district has been purchased by a farmer, George I. Stocks, who is "sold" at once, and declares milking a pleasure.

GRAND VALLEY.—R. Brooks, local implement dealer, has taken on a unique "side-line." He has bought, for about $10,000, the Edgar Telephone System, with 400 'phones.

GUELPH.—R. B. Robson, proprietor of the Robson Motor Car Co., flew from this city to Toronto, July 8, in a Curtis JN4, in order to transact business more speedily than the train service would permit.

A. J. HAYES

Arthur J. Hayes, former Sales Manager of the Ford Motor Co. of London, Ontario, has resigned to go to Windsor, where he becomes Sales Manager of the Champion Spark Plug Co. of Canada, Limited.

Prior to taking up his new duties, Mr. Hayes will spend a few weeks travelling about Canada getting acquainted with the jobbing trade and familiarizing himself with the sales policy of the company. Returning, he will make his headquarters at Windsor, where a new quarter of a million dollar plant is being erected by the Champion Spark Plug concern.

STOUFFVILLE.—R. E. Brown has taken the Gray-Dort and Liberty agencies for this district.

HAVELOCK.—Elliott's Garage, at Norwood, is dividing its energies. F. A. Webb will look after repairs and accessories, and Coleman Elliott will devote all his energies to selling the new light Overland.

TORONTO.—The Fiat Motors Co., of Turin, Italy, has sent Signor Elmo de Paoli to Canada and the U. S. to investigate the motor car industry and market. He will make extensive visits to Eastern and Western Canada.

P. Q. AND MARITIMES

SUMMERSIDE, P. E. I.—The local Government is trying out various road machines and road tractors.

VILLE ST. PIERRE.—(Near Montreal) The Northwestern Chemical Co., of Marietta, Ohio, have completed their new Canadian factory here.

RICHMOND, P. Q.—Dyson and Rock have completed the installation of a huge gas tank.

BRIDGETOWN, N. S.—Charles Vye. of Middleton, has been appointed district Brisco agent.

ST. JOHN, N. B.—J. Royden Thomson and Walter M. Sherwood have taken over the premises formerly occupied by the Overland Service Co., and will conduct the new business in Duke street under the name of Victory Garage and Supply Co., Ltd.

UNITED STATES

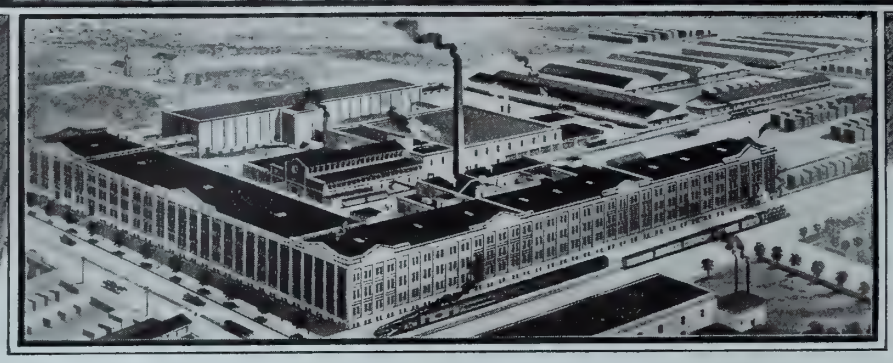
CANTON, OHIO.—The Timken Roller Bearing Co. is building a million and a half dollar plant at Columbus. Thus 1,000 men will be added to the Timken pay-roll.

DETROIT.—Packard shareholders have authorized an issue of $7,500,000 preferred stock, and an increase in authorized capital to $30,000,000 common and $20,000,000 preferred stock.

NEW HOLSTEINS, WIS.—Lauson tractors have recently obtained agencies in the following foreign countries: Australia, Japan, China, Strait Settlements, Scotland, Spain, Portugal, Norway, Cuba, France, Belgium, Roumania, Italy and other countries.

Massey-Harris Factories

Toronto Factory.



Woodstock (Wagon) Factory.

Head Offices, Toronto, Ont.

Montreal, Que.

Moncton, N.B.

Winnipeg, Man.

Swift Current, Sask.

Regina, Sask.

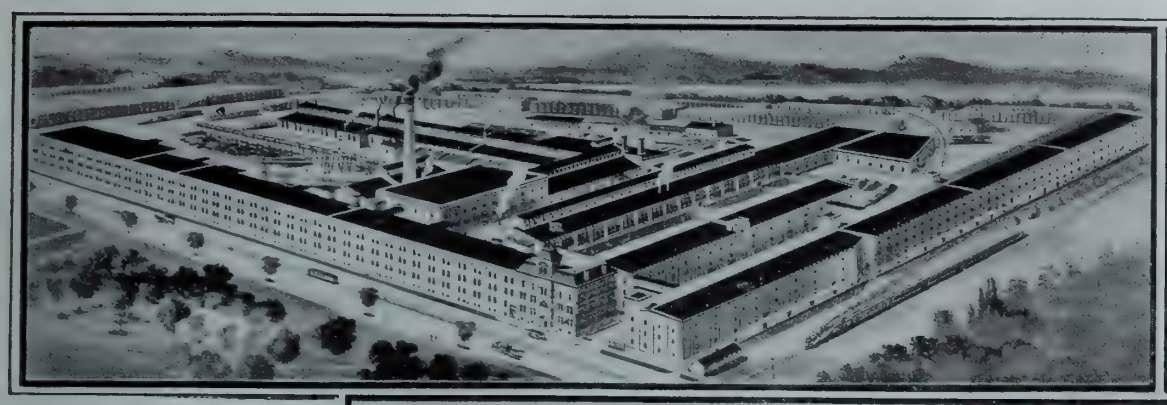
Quality

Quality in farm implements is what has brought the Massey-Harris Organization to be the largest of its kind in the British Empire.

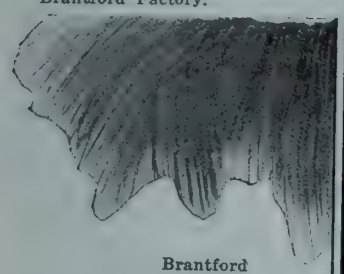
Beginning away back in 1847 — 72 years ago — the few Implements turned out then, were known for their uniformly high Quality, and to-day in the five large Factories now kept busy turning out all kinds of Implements—Quality is the one thing most sought after. The reason given by most farmers as to why they keep on buying Massey-Harris Implements is—"They are so uniformly good and reliable." The materials which enter into the Implements bearing the name Massey-Harris are the best that can be procured, and the workmanship is thorough. Every Machine is tested, and must come up to the Standard before it is allowed to leave the Factory.

The name Massey-Harris on Farm Implements means easy sales and repeat orders.

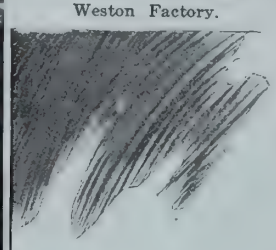
and Canadian Branches



Brantford Factory.



Brantford (Plow) Factory.



Weston Factory.

Service

As with Quality, so also in Service, Massey-Harris excels. Branch Offices in all large cities, in close touch with every agency, enabling them to render to the farmer an efficient service.

The Line of Implements Manufactured is complete, the sale of one machine opens the way for many others. You always have something in season to sell.

THE LINE COMPRISES:

Grain Binders.	Hoe, Shoe and Disc Drills.	Cream Separators.
Reapers.	Fertilizer Sowers.	Plows.
Corn Harvesters.	Disc Harrows.	Scufflers.
Mowers.	Drag Harrows.	Land Rollers.
Rakes.	Feed Cutters.	Packers.
Tedders.	Pulpers.	Wagons.
Side Delivery Rakes.	Grinders.	Sleighs.
Hay Loaders.	Ensilage Cutters.	Gasoline Engines.
Cultivators.	Manure Spreaders.	Saw Outfits.
Fertilizer Drills.		Tractors, Etc.

Calgary, Alberta.

Edmonton, Alberta.

Kamloops, B.C.

Saskatoon, Sask.

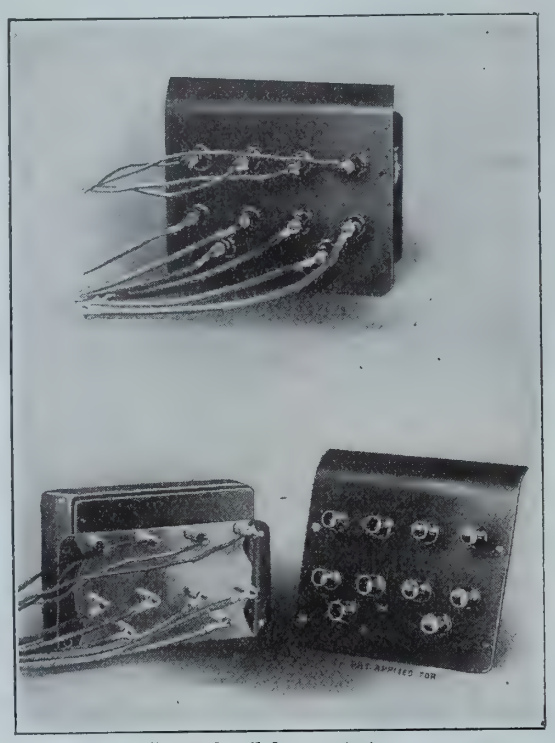
Yorkton, Sask.

Vancouver, B.C.

Automotive Accessories *and* Implement Equipment

COIL BOX PROTECTOR

THE "Casco" metal coil box protector, (for Ford cars) manufactured by the Cooper Auto Supply Co., Thomasville, Ga., is designed to prevent trouble caused by wet coils. Wet coils have caused break-downs, delays, repairs and other difficulties. This protector, it is claimed, prevents such troubles by eliminating the cause. It keeps rain and dampness from reaching the coils, insuring the vital parts of the car against possibility of damage from moisture. It can be installed in a few minutes, without the aid of a mechanic.



"Casco" metal coil box protector.

SCHEBLER CARBURETOR

THE Model "A" Schebler Plain Tube Carburetor is a distinct advance in the science of carburetion, as several new features and principles of carburetion are incorporated in this instrument.

This plain tube carburetor is built around the "Pitot" tube principle, utilizing the differential head created by an upstream and downstream "Pitot" to control the fuel delivery. The use of the Pitot tube principle gives a fuel flow absolutely proportioned, and controlled by the air, for acceleration.

The Model "A" carburetor has a low speed or idle device, which delivers fuel and air at the low edge of the throttle disc in its closed position. This idle is so designed that it operates and blends with the fuel supply from the main nozzle in such a manner as to prevent any flat or dead spots.

This carburetor has no small air vents open to the outside air to clog up with dust or foreign substance. In case of a backfire there is no chance of back-pressure blowing gas through to the outside of the carburetor and causing a fire.

The Model "A" has two gasoline needle adjustments: one for adjusting the idle or low speed, and one for the high speed. These two adjustments take care of the slight variations that occur in all motors, and also the extreme changes in weather conditions.

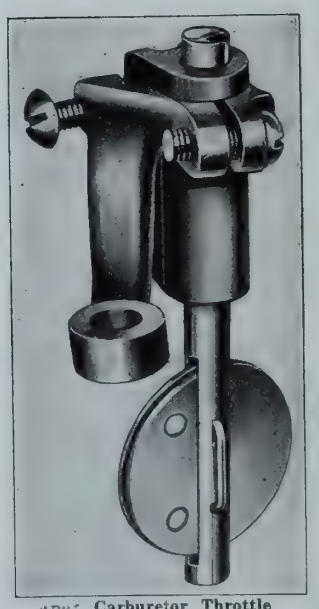
The Model "A" carburetor is equipped with a starting shutter in the air intake, and gasoline strainer at the bottom of the bowl. The gasoline connection and flange are made in accordance with the S. A. E. standard.

A dash adjustment is provided for warming up the motor. Manufacturers are Wheeler-Schebler Carburetor Co., Indianapolis, U. S. A.

Schebler Plain Tube Carburetor.

Apex Fillometer

Reserve gas tank for Fords.



Apex Carburetor Throttle

LIBERTY MOTOR SUPPORT

THE LIBERTY MOTOR SUPPORT stops all vibration or shaking of the motor which crystallizes the forging arms and causes them to snap; it prevents slippage of the high speed and transmission bands, giving more even pulling strain and power to a Ford truck delivery or pleasure car.

The support consists of a malleable iron casting and two wrought iron hangers. It prevents vibration and is a permanent repair for a broken crank case arm. Prevents slippage of the transmission bands. Will give increased power and add years to the life of any Ford car or truck.

Manufacturers: Motor Support Co., 431 S. Dearborn St., Chicago., Ill.

Liberty Motor Support for Fords.

Jiggle Oil Cup

RESERVE GAS TANK

THIS device, manufactured by the Cox Brass Mfg. Co., Albany, N.Y., is a reserve tank, gas tank cap and gauge combined. It is ready for an emergency, and will hold enough gas to drive 3 to 5 miles. The tank is made entirely of a drawn brass shell without seams and is attached to a special cap which takes the place of cap already in the Ford tank. This reserve tank will contain about a quart of gasoline.

APEX PRODUCTS

TWO Ford adjuncts which give increased efficiency are the Apex Carburetor throttle and the Apex Fillometer. The former is said to increase mileage 25 per cent. to 50 per cent., giving a positive regulation of air and a rich mixture for quick, easy starting. The Fillometer tells you how much gas you have, at a glance at a dial at seat edge end.

JIGGLE OIL CUP

THE Jiggle Oil Cup is said to be the first practical Canadian Tractor automatic oil cup on the market that anyway near approximates in price the common type of grease or oil cup in general use.

Its simplicity, economy and positive automatic feed recommend it to every manufacturer of passenger cars, trucks and tractors.

Its construction is unique. Cap can be quickly removed by pressure upon clip prongs which hold it securely in place when seated. Three filling gates permit charging with oil from any side. A fine mesh screen strains every drop of oil which passes through it. This screen is self-cleaning, due to the movement of oil back and forth over it.

Pockets catch and hold any dirt or sediment, preventing its entry where it can work injury. To remove collected sediment, bottom of cup may be unscrewed.

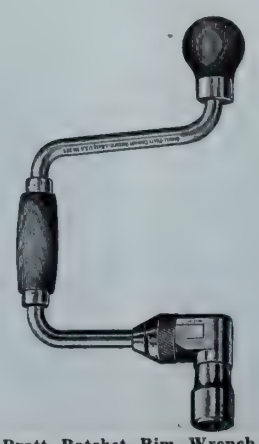
The ball valve is inoperative when the car is standing. When in motion this ball controls oil seepage in proper quantity down through an oil duct.

The Jiggle Cup may be tilted to a 45-degree angle without unseating the ball valve. It is furnished in both straight and elbow types, and manufactured by the Autoware Corporation, Detroit, Mich.

RATCHET RIM WRENCH

THIS is a very strong and serviceable Rim Wrench with a ratchet mechanism for added convenience. The ¾-inch hexagon socket also has a square taper hole for holding countersinks, reamers, screw-driver bits, and drills with bit brace shanks. The ratchet is operated by a ring shift. The sweep is 10-inch forged steel. All steel parts are polished and nickel plated. The head and the handle are finished with rubber enamel. The handle runs in adjustable collars. These Rim Wrenches are provided with ⅝, ¾, or ⅞ inch hexagon sockets as desired.

Manufacturers: Goodell-Pratt Co., Greenfield, Mass.



Goodell-Pratt Ratchet Rim Wrench

C. G. E.
Automobile Accessories
"Tested for Service"

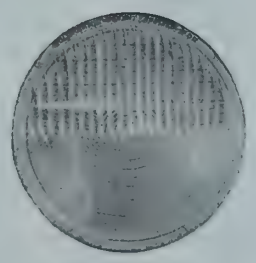
Automobile accessories should be bought with a view to improving a car and not making it an excuse for buying freak articles which prove in the long run to be neither useful nor ornamental. C.G.E. Automobile Accessories are reliable articles chosen for no other reason than to give the car owner service.

Pyrene Fire Extinguishers

The Pyrene will extinguish the flame of blazing gasoline, kerosene, benzine, acetylene, etc. It is safe and certain on electrical fires and will extinguish a blazing arc of any voltage without danger to the operator.

"Kopper King" Spark Plug

Sectional view of the ½" Reg. Kopper King. Note the thick steel, coated inside and out with a heavy plating of copper, the large porcelain and the heavy centre electrode.



Holophane Headlight Lens

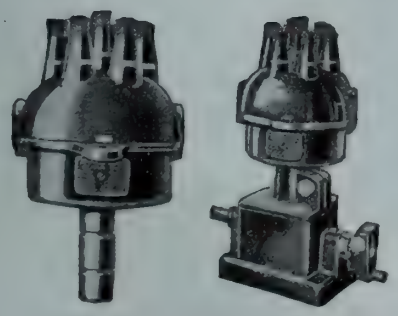
The lens that makes night driving safe and enjoyable. Made to fit all makes of cars.

Goliath Spark Plug

A plug of careful construction and extra strength, well suited to meet the most strenuous demands of pleasure car or motor truck operation.

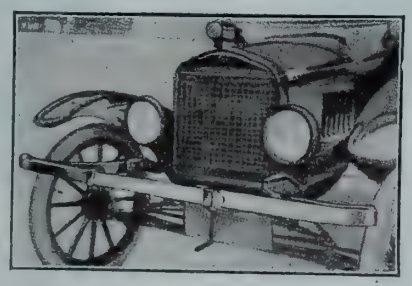
Eveready Portable Searchlights

At any instant the dark may trap you unless you have a Daylo within arm's reach. Every car owner should have one in the pocket of his car. Every household should have one for emergency use.



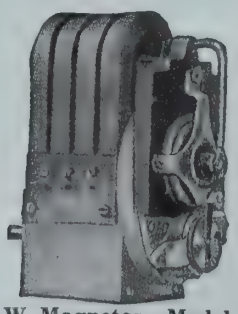
Atwater Rest Ignition—Type K-2

This system of ignition is so simple in construction that it will enable you to forget ignition entirely. A system made to suit every type of tractor.



Lyon Bumper For Ford Cars

This bumper has the same unequalled protective features as the bumpers of the larger cars. It has a strong bracket, two feet long, firmly attached under the car, making a rigid support.



K-W Magnetos—Model H

A strong, well made magneto capable of giving service under the most trying conditions. In ordering be sure to specify the number of cylinders and whether for 2-cycle or 4-cycle engine.

C. G. E. Automobile Accessories are for sale by all reliable dealers

Canadian General Electric Company, Limited

Head Office - TORONTO

Branch Offices: MONTREAL, QUEBEC, HALIFAX, SYDNEY, ST. JOHN, OTTAWA, HAMILTON, LONDON, WINDSOR, COBALT, SOUTH PORCUPINE, WINNIPEG, CALGARY, EDMONTON, NELSON, VANCOUVER AND VICTORIA.

Manufacturers and jobbers of electrical goods for every purpose. Wholesale only. Dealers everywhere sell C.G.E. products.

ADAPTO FOR FORDS

THE Adapto Belt Power attachment for Fords is manufactured by the Geneva Tractor Co., Geneva, Ohio, and has now been placed on the Canadian market. The Canadian agent is the Cooke Metal Wheel Co., Orillia, Ontario, and W. A. Duncan, 58 Front St. W., Toronto, is acting as distributor.

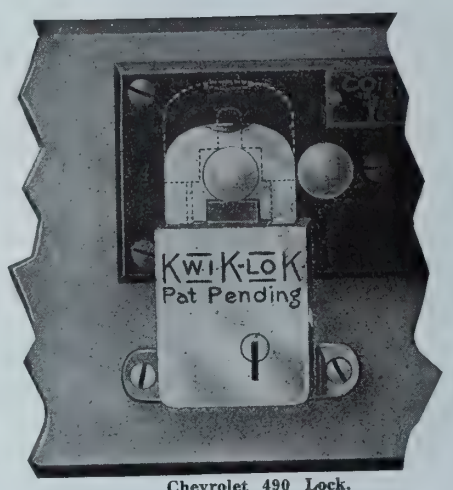
This attachment, it is claimed, will do anything that an 8 horse-power gas engine will do, and at a big saving. It is stated that it will grind grain, buzz wood, pump water, shell corn, bale hay, cut ensilage, do the washing, light house and barn, churn butter, and separate cream.

The Adapto is rigidly connected to the Ford engine bed. It is clamped rigidly to the Ford crank-case at the back end and is mounted on roller bearings at the front. It is claimed that the shaft and pulley cannot get out of alignment, and that there is no strain on the engine. It takes only five minutes to remove the power pulley and battleship fan when belt power is not to be used.

Adapto Belt Power Attachment for Fords.

CHEVROLET LOCK

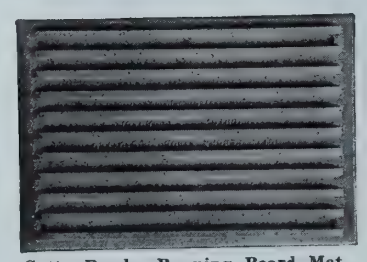
THE "kwick-lok" is an ignition lock for the Chevrolet 490, which the manufacturers claim is thoroughly efficient. It is one of the most recent placed on the market, and is manufactured by the Michigan Tire and Accessories Co., Grand Rapids, Mich. It is very simple in its construction.



Chevrolet 490 Lock.

RUNNING BOARD MAT

THE Gutta-Percha and Rubber Co., 4 Yonge St., Toronto, is manufacturing a new running board mat for motor cars. This mat is 11⅜ inches long by 7¾ inches wide by 11-32 inch thick. They are of the moulded type and each mat has eleven bars which have been spaced to permit of the greatest efficiency in their functions. The edges of the mat are bevelled all around and they can be applied with either screws or bolts. To prevent the fastenings from pulling out with the pressure of the foot when either entering or leaving the car they are made with metal burrs embedded in the rubber, which hold the bolts or screws in one position and permit of the fastenings being screwed tight. The mats are built of one of the toughest rubber stocks and are sufficiently firm to prevent the bars collapsing under pressure. The rubber is jet black, and in addition to preventing the great deal of dirt and dust from being carried into the body of the car, they give a finished appearance to it.



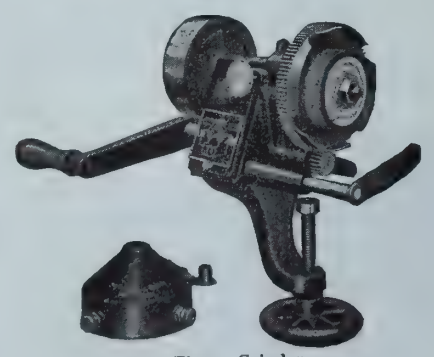
Gutta Percha Running Board Mat.

REX TIRE PUMP

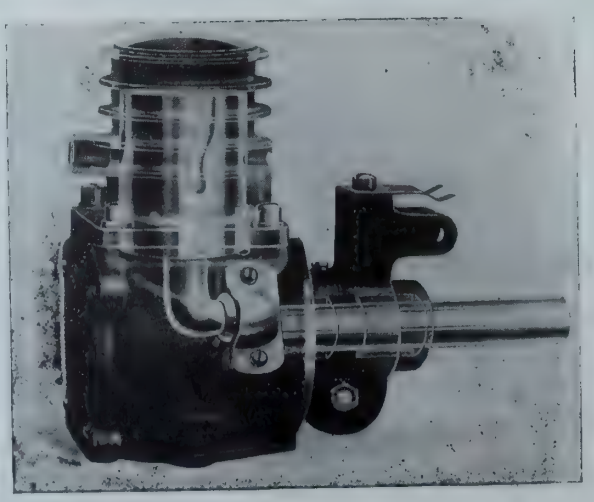
THE Rex valveless pressure pump combines principles of construction and operation said to be entirely different from any other tire pump on the market. It is the piston valve type. The makers point out that it takes three times as long to raise the pressure in a tire from 40 to 80 pounds as it does from 0 to 40 pounds, this condition being entirely due to leakage and back pressure on the poppet type of valve.

The Rex piston valve pump is said to combine the efficiency and wearing qualities of the three, port to stroke and Knight piston valve type of gasoline engines. As the operation of the piston valve is entirely mechanical, the back pressure has absolutely no effect and the only resistance the pump must overcome is the actual pressure on the tires. It comprises only four parts, the cylinder and base casting, piston, connecting rod and shaft, each part sufficient size to be practically wear proof and positively unbreakable.

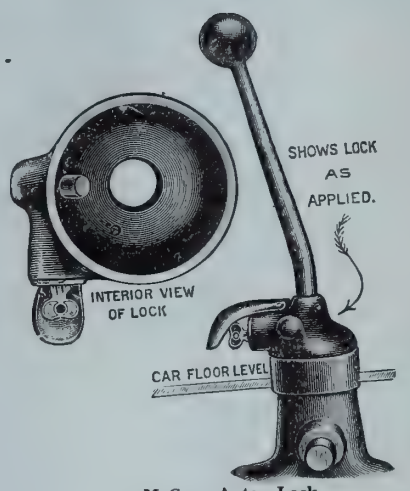
Rex pumps are lubricated by means of graphite lubricant carried in the pump base. Air vents are provided in the base which equalizes the pressure therein and prevents forcing the lubricant out of the pump or past the piston into the tire.



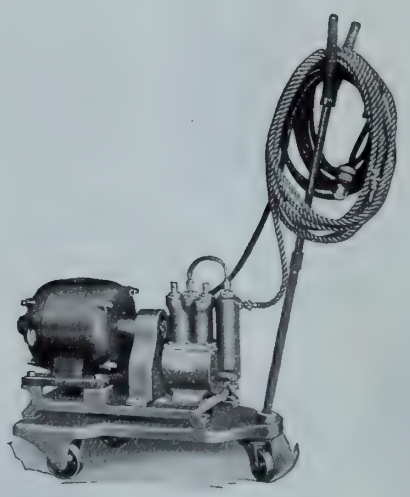
Ross Timer Grinder.



Rex Tire Pump.



McCoy Auto Lock.



Master Garage Pump.

The combination of the ball and socket joint and its eccentric position at the end of the crankshaft, when in operation will give the piston an oscillating and reciprocating motion. The oscillating motion of the piston will mechanically open and close the intake and outlet ports at the proper time.

When the piston is up, air is permitted to enter through the preliminary intake hole into the chamber where it is compressed to about 10? pressure upon the down stroke of the piston. At the same time a vacuum is created in the cylinder into which air is admitted upon the contact of the intake groove with the intake port. As the piston travels downward the intake port is shut off by the curve of the groove. This groove is then connected with the groove leading into the lower chamber and which admits the compressed air from this chamber into the cylinder as the preliminary compression. On the up stroke of the piston the air in the cylinder is then compressed until the outlet groove comes into connection with the outlet port. At this instant the compressed air is forced through the hole in the piston which is connected with the outlet groove and then on out through the outlet port hole.

McCOY AUTO LOCK

THIS lock, manufactured by the McCoy Auto Lock, Hamilton, Ont., is a transmission locking device. It is fastened to the gear shift lever, by means of a screw or tapered pin, at the top of transmission case cover, and also acts as a dust cap cover. It prevents operation of gear shift lever by locking in neutral. Simply removing the key locks the car.

GARAGE PUMP

THE Master Garage Pump, Model "P," manufactured by the Hartford Machine Screw Co., Hartford, Conn., is designed to stand the hard and almost abusive service which a pumping outfit is so likely to receive in a medium to large sized garage. It consists of a sturdy, efficient, two cylinder pump, (bore 1¾ inch, stroke 2 inches) driven by a ½ h. p. General Electric motor, mounted on a neat metal truck or stationary base, as desired. Running at normal speed (500 R. P. M.) this machine will deliver 2½ cubic feet of free air per minute or will completely inflate a 37 in. x 5 in. tire from flat to 90 lbs. pressure in less than 2 minutes. Pistons are of special steel, carefully hardened and ground to exact size and lapped into the cylinders. No rubber or leather packing rings are used in the entire construction. No tank is necessary, pump may be used direct to the tires. A small expansion-chamber is attached however, which removes all impurities from the air and it is absolutely impossible for any oil to get into the delicate inner tubes of the tires.

ROSS TIMER GRINDER

THE Ross Timer Grinder, manufactured by the A. P. McCulloch Machine Co., 216 High Street, Boston, Mass., is a bench grinder for grinding the contacts of Ford timers to an absolutely round, true surface. The machine is fitted with a special chuck that requires no skill whatever in centering; the grinding stone revolves inside the timer at a high speed, while the chuck and timer very slowly revolves around the stone. It is fitted with a very accurate adjustment, so that the oldest and most worn timer may be ground with a surface like glass and equal to new in from two to three minutes.

The whole machine is substantially constructed, all gears being cut from solid steel bar, and lubricators fitted to all moving parts. When not in use as a timer grinder, the chuck may be instantly removed, a large wheel fitted, and the machine used for grinding tools, twist drills, etc. It has been well tried, having been used in Great Britain for the last three years by the War Office. The price is $21.00, F. O. B. Boston.

HOLD 'EM IN THE ROAD

THE "Hold 'em in the Road" is manufactured by the Cooper Auto Supply Co., Thomasville, Ga. This device keeps the front wheels on a straight course, in spite of bumps, shocks and ruts; it removes one of the chief dangers of motoring. It also acts as a radius rod brace, an axle support and prevents rattling.

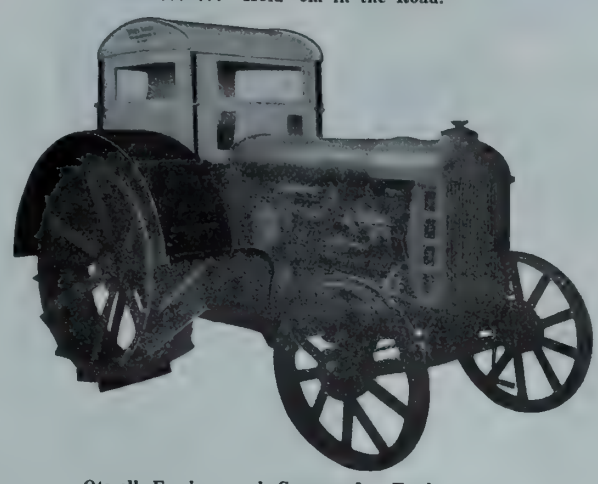
... ... "Hold 'em in the Road."

CANOPY AND FENDERS

THE Otwell Canopy, manufactured by the Tractor Equipment Co., Detroit, will protect the driver from the blazing sun and rain as well. It is designed so that the canvas can be tied up around the ridge rod on shady sultry days, permitting the driver to ride in the open. The Otwell Canopy fastens to the fenders without extra bolts of any kind. It is light, strong and easily attached. A special tightening rod enables the canvas to be kept tight at all times.

The manufacturers state their reasons for placing a Fordson fender on the market to be three-fold: The first was to provide safety and protection for the driver against any possible harm that might be caused by the rear wheels or lugs. The second was to keep the driver free from dust, mud, stones, cornstalks or tree limbs. The third was to give protection to outside objects, such as preventing the lugs carrying tree limbs under the wheels in orchard work.

The Otwell Fender is made from heavy sheet steel, welded and riveted according to the latest factory methods. They are attached to the main body of the tractor by four strong braces and also clamped firmly to the axle housing.

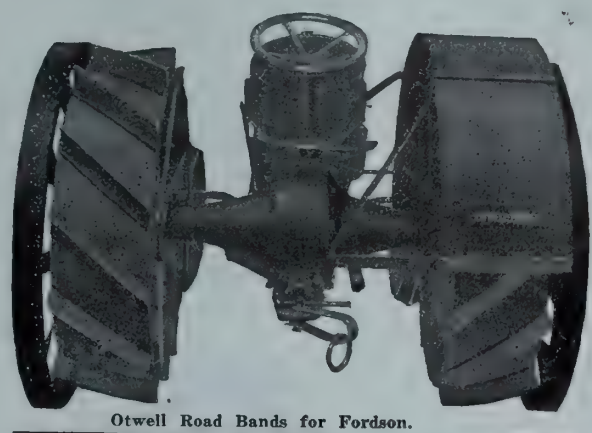


Otwell Fenders and Canopy for Fordsons.

TRACTOR NIGHT LIGHT

THE increasing vogue of tractors with Canadian and American farmers has brought into the market a new lamp with the name "Victor Tractor Lamp." It is a night light for tractors designed to cure the prevailing "blindness" of these machines. The manufacturers, who are The Corcoran-Victor Company, of Cincinnati, Ohio, claim that the lamp adds fully fifty per cent. to the usefulness of tractors when making it possible for farmers to meet emergencies, when necessary, by getting in extra shifts after sundown.

The lamp, in general, is an adaptation to tractor purposes of the standard automobile light. Essentially, it is an automobile lamp strongly reinforced, and built onto a bracket, as the illustration indicates. The lamp can throw a light over a considerable area. The construction is sturdy to enable the lamp to withstand rough riding. A shallow reflector spreads the rays, instead of concentrating them on a small spot. The light can be used either with electricity or acetylene. A smaller auxilary lamp is attached to the rear of the main lamp. The lesser light illuminates the rear of the tractor to enable the driver to observe how the plows, or other implements may be working. This smaller lamp is detachable, and fitted with an extension cord.



Otwell Road Bands for Fordson.

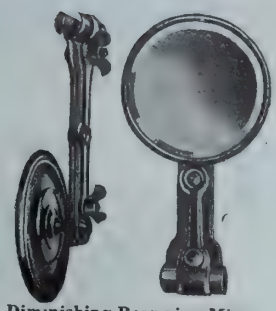
Victor Tractor Lamp

RAIN RUBBER

THE Tri-Co. Rain Rubber, manufactured by the Tri-Continental Corporation, 2665 Main St., Buffalo, N.Y., is a device designed for clearing the entire windshield clean across top and bottom. In addition to its clearing qualities, it is said to work practically without effort. It slides with a touch of the hand from one side of the windshield to the other in the slot between the upper and lower glass.

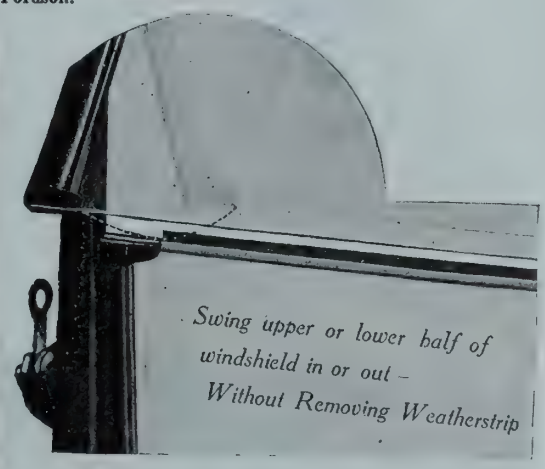
It may be used in conjunction with the rubber weather strip. It will not rattle. It will not scratch. All rivet heads are topped with celluloid. Two pieces of flexible gum rubber are used on each of the cleaning arms, which not only clear, but wipe dry.

The Rain Rubber may be operated by either driver or passenger. It is adjustable to various widths of glass and is made in four different models designed to cover every known type of 2-piece windshield.

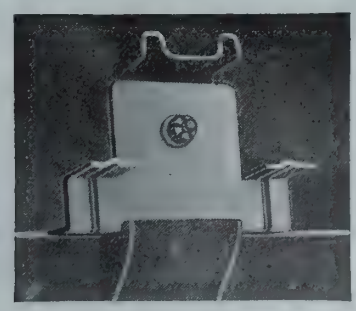


Dimnishing Rear-view Mirror and Bracket. The latter can now be obtained 14 inches long.

Standley Carrier, folded, to go under the seat.



Tri-Co. 2-way Windshield Weatherstrip.



Goodrich Repair Arm, used as a reinforcement.

Kant-Leek Washer

MIRROR BRACKET

AN extra-length mirror bracket—14 in. long—is now being manufactured by the Motor Products Corporation, Walkerville, Ont., for attaching their mirrors to the bodies of commercial vehicles which require longer brackets. Three shapes of rear-view beveled plate glass mirrors and one type of diminishing mirror are made to attach to the brackets.

FORDSON ROAD BAND

OTWELL Road Bands can be quickly attached to the Fordson, and carry the weight of the tractor in such a way that the driving cleats do not touch the paving surface. These bands use the same holes in the web of the tractor wheel as are used for the extension rim —and also the same bolts and washers. Manufactured by Tractor Equipment Co., 217 Pacific Avenue, Detroit.

STANDLEY CARRIER

THIS product of the Standley Skid Chain Co., Boone, Iowa, is a luggage carrier which fits on the running board. It can be folded, and takes up very small space under the seat. As it clamps on, there are no holes in the running board, and the car is not marred.

WINDSHIELD WEATHERSTRIPS

THE Tri-Co. 2-Way Windshield Weatherstrip, manufactured by the Tri-Continental Corporation, 2665 Main St., Buffalo, N.Y., allows opening two ways—in and out. It makes possible the opening of the lower glass for ventilating purposes inwardly, without removing the Weatherstrip. It is constructed of rolled metal, of particular specification, nickel plated and polished; also finished in black enamel. It is fitted with a flexible rubber, forming an air-tight and water-tight seal across the channel of the windshield.

It is made in three sizes, known as 36, 38 and 40 in. May be cut to fit any glass.

GOODRICH REPAIR ARM

THIS device is both a repair arm and a preventive of trouble. It is claimed that with this repair arm the supporting arm of the Ford Crank-case can be fixed in fifteen minutes, without removing the engine, or drilling a single hole. As a preventive, it strengthens the regular Ford arm. Manufacturers: Goodrich-Lenhart Mfg. Co., Widener Bldg., Philadelphia.

KANT-LEEK WASHER

THESE washers, manufactured by the Apex Mfg. Co., St. Louis, Mo., are offered to Ford owners as an inexpensive but positive cure for "leaky" rear axles. It is claimed that with these washers when grease is put in the differential it "stays put," and renders the desired service.

ROCK ISLAND PLOW

THE Rock Island Plow Co., Rock Island, Ill., has brought a new plow —the No. 7, 2-3 bottom tractor plow. The manufacturers state that this plow is built of extra-strength material. Some of the distinctive features claimed for it are: front furrow wheel lift, instead of land wheel lift; a simple, positive, unenclosed clutch; lots of clearance, fore and aft; extra wide tired wheels; strong frame construction; quick detachable shares, one lever forcing the share off. The No. 7, it is announced, will work behind any tractor, and is equipped with 2 or 3 twelve or fourteen-inch bottoms.

CRANKING DEVICE

THE Non-kick cranking device, made by Jackels and Campbell Co., 1622-4 McGee St., Kansas City, can be attached in five minutes with no tools but a wrench. It is guaranteed to relieve all apprehension of injury in cranking a Ford, and is made for all models.

CHAIN TIGHTENERS

THE M.H. Merchant Corporation, 236-8 Emma St., Syracuse, N.Y., are marketing a non-skid chain tightener which is said to have stood the strain of heavy service. The manufacturers say:

"By a scientific arrangement of the steel rods we are able to equalize the work of ONE SPRING and give an equal tension at all points of contact with the chain, making this article FOOL PROOF, as it will allow the chain to CREEP as it should on any make of tire, at the same time take up the slack as the chain wears or the cross chains break, as it is adjustable."

LIQUID LEAK-SEAL

ADAMS and Elting, 17 Adelaide St. E., Toronto, have placed on the market the Ad-el-ite Leak-Seal for radiators, in both liquid and powder forms. This is a scientific preparation which is guaranteed to repair leaky radiators and water jackets in a few minutes.

HOSE CLAMP

THE Lock Roll Hose Clamp embodies many efficient qualities, and for this reason they were manufactured almost exclusively during the war for use on American aeroplanes both in the United States and Europe. The unique, scientific, yet simple construction of the Lock Roll Clamp places it in a class entirely alone. It is the easiest of all clamps to apply; it is perfect fitting; water, steam and air tight; no nut to lose or strip; guaranteed by the manufacturers to be non-stripable and jar-proof. It is manufactured in rust-proof and nickel-plated finish, thus giving it a wide field. The Dominion Rubber Systems, Ltd., headquarters Toronto, have the exclusive control of the sale of this article throughout Canada.

NEW WINDSHIELD

THESE shields are designed to meet the many calls for a Closed Body Shield, and take the place of wooden shields.

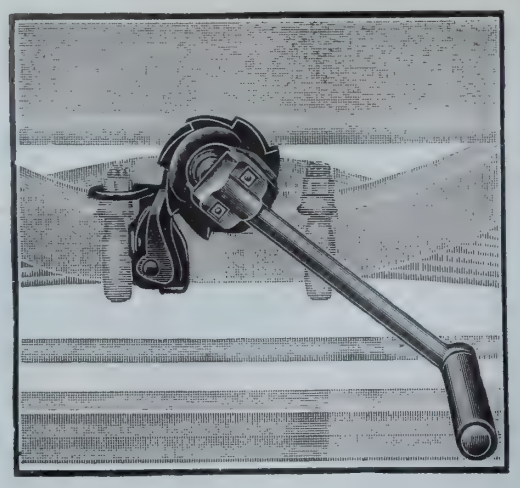
In addition to the regular pivot action, the shield is fitted with quadrant and positive lock, which insures stability and long life, even with the hardest usage, on trucks with solid tires, and the upper and lower glass may be placed in rain vision and ventilating position and held secure by thumb nuts, which lock the shield in position. They are made in two sizes to cover the field for large and small bodies; with the exception of size and glass, both models are the same. The Canadian distributors are Hyslop Bros., Toronto.

KESTER WIRE SOLDER

KESTER Acid-Core Wire Solder is a self-fluxing wire solder. The solder (strictly tin and lead) is a hollow wire filled with an acid soldering flux. No other flux or acid is required. It will solder any metal except aluminum, is the claim, and is especially suited for automotive repair work. It is cheaper to use than solid wire or bar solder as no time is lost hunting, preparing or applying the acid soldering flux, also is very convenient.

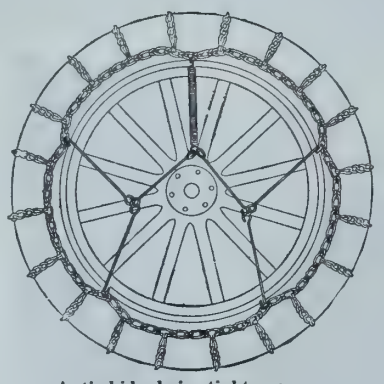
It can be used for radiator leaks, spark plug terminals, cracked fenders, gasoline pipe and tank joints, battery terminals, electrical connections, speedometer flexible shaft and general garage use.

It is sold in one pound coils in cartons and on one, five and ten pound spools; size 1-8 in. diameter, by the Chicago Solder Co., Chicago, Ill.

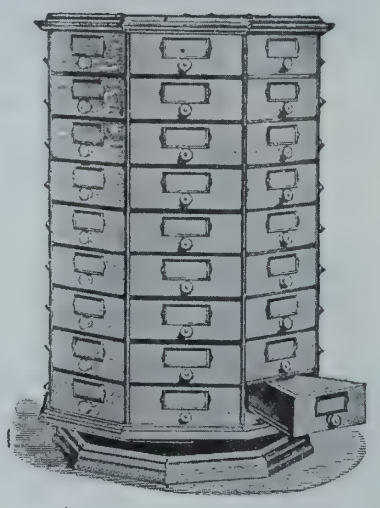


Non-Kick cranking device.

House Wire Wheel.

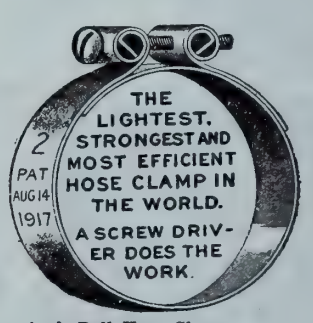


Anti-skid chain tightener.



Revolving Case

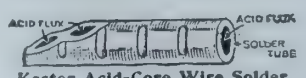
Ad-el-lite Leak-Seal.



Lock Roll Hose Clamp

New Windshield.

Ambu Cadmium Voltmeter.



Kester Acid-Core Wire Solder

Ambu Cadmium Voltmeter Leads

HOUSE WIRE WHEELS

THE beauty of the wire-wheel equipped Ford car and its case of changing tires are only two of the advantages inherent in the construction and material of this equipment.

The safety of wire wheels is in their greater strength at a vital point. HOUSE Type wire wheels for Ford cars cannot collapse, no matter how violent the collision or skidding accident. Each spoke will stand a strain of over 3,200 pounds.

The suspension construction of HOUSE Type wire wheels for Ford cars gives easier riding. The car is hung from dozens of springy, resilient spokes of tempered steel that absorb shocks before these get to the axle. This elastic cushioning absorbs vibration from road irregularities and from sudden applications of breaks or clutch. It affords personal comfort to the passengers, and prolongs the life of the car and tires. Hyslop Bros., Toronto, are distributors.

REVOLVING CASE

A REVOLVING case which is a time saver, as well as an aid to greater efficiency in storing small articles, is manufactured by the American Bolt Screw Co., of Dayton, Ohio. The illustration shows a case with blank drawer fronts provided with label holders, so that the articles in the drawers can be marked on the labels and be found readily. The drawers are all provided with stops to prevent their removal from the case. They are made very substantially and well finished. Regular stock cases have frames made of poplar wood, stained mahogany, and the fronts of the drawers are of Norway Pine finished in natural color.

CADMIUM VOLTMETER

THE AMBU Cadmium Voltmeter is a special voltmeter designed for any general voltage readings up to 2.8 volts, and for making Cadmium Tests on Storage Batteries. The scale is three inches long, having four red lines drawn on the scale to indicate the readings which should be obtained when cadmium tests are made. These lines are marked as follows: "Neg, charged," "Neg. Discharged," "Pos. Charged," and "Pos. Discharged." These lines mark the readings that are obtained when the plates are fully charged, and when they have been discharged as far as is considered safe, that is, until the voltage of the battery or discharge has fallen to 1.8 volts per cell.

The moving element is enclosed in a hardwood case which is 4-5/8 inches by 4-1/4 inches, by 2-1/2 inches. The meter complete weighs two pounds. Each scale is specially calibrated and hand drawn to assure accuracy.

Cadmium tests are made for the purpose of testing positives and negatives separately. The tests are made by dipping a rod of cadmium in the electrolyte of a cell, and then taking separate voltage readings between the cadmium rod and the positive and negative terminals on the cell.

The Cadmium leads which accompany the Cadmium voltmeters consist of two brass prods fastened into wooden handles, and having attached to them lengths of very flexible wires with acid proof insulation for connecting them to the voltmeter. One of the brass prods has a length of chemically pure Cadmium attached to it. This Cadmium is dipped in the electrolyte in making the tests.

The AMBU Cadmium Voltmeter and Leads are the only ones on the market. The test itself is not new, as it has long been known, and has been in use in battery manufacturing plants. The American Bureau of Engineering, 1601-3 South Michigan Avenue, Chicago, is, however, the first company to manufacture a special outfit for making such tests.

FORD DISTRIBUTORS

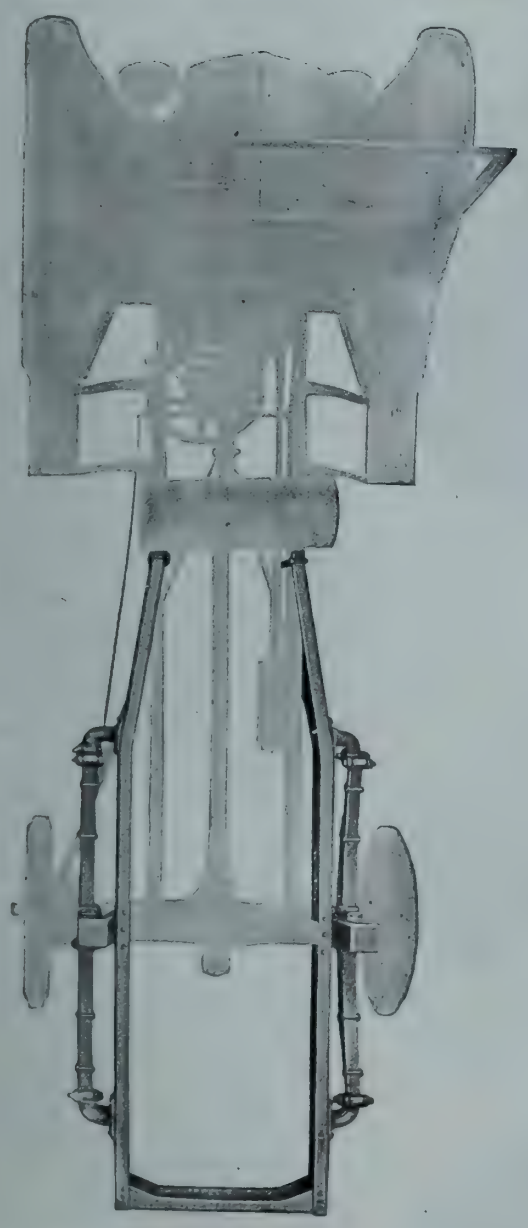
Increase your Sales by equipping Ford Ton Trucks with

Olson Frame Extensions

with side springs

Proper Spring Resiliency **Longer Truck Life**

Increased Carrying Capacity



MADE IN CANADA

TWO SIZES

No. 8	No. 9
Bodies	Bodies
10 x 6 feet	12 x 6 feet
$165.00	**$215.00**

F. O. B. Windsor

You can recommend Olson equipments to every customer of yours using a Ford Ton Truck. They correct overhang and all rear whip. The Ford rear spring is entirely removed and by the use of long 52 inch side springs which are attached to the frame the load is conveyed direct to the wheel hubs in place of being carried on the axle. This patented principle makes for increased carrying capacity with proper spring resiliency and a consequent saving on the Truck from the tires to the motor.

We recommend Olson Equipments to Cartage Companies, Furniture Dealers, Produce Concerns, and, in fact, in every line of business where hauling is done with a Ford Truck. They will earn their cost in a single season.

Standard bodies are now carried in stock by nearly all body manufacturers

See our exhibit at Toronto Exhibition

Manufactured under Olson Patents by

SWEDISH CRUCIBLE STEEL COMPANY

OF CANADA, LIMITED

MOTOR TRUCK DIVISION

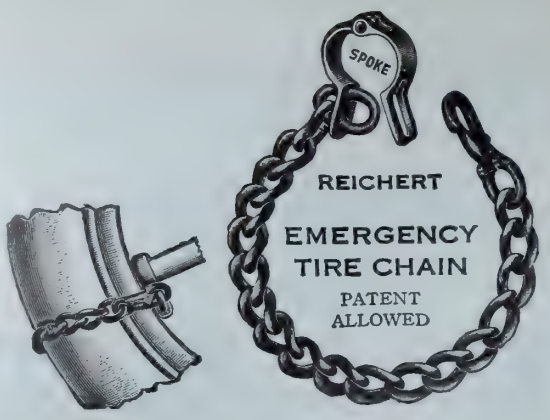
Windsor, Ontario, Canada

DETROIT, MICH., U.S.A.

EMERGENCY TIRE CHAIN

REICHERT'S Emergency Tire Chains are easily and quickly adjusted. They are so simply constructed that a child can install them. Place the malleable clamp on the spoke, then slip the chain over the tire and hook the snap in the loop—that's all. No jacks or tools required. A set of four chains, packed in a bag, is sufficient to pull you out of the mud, sand or snow.

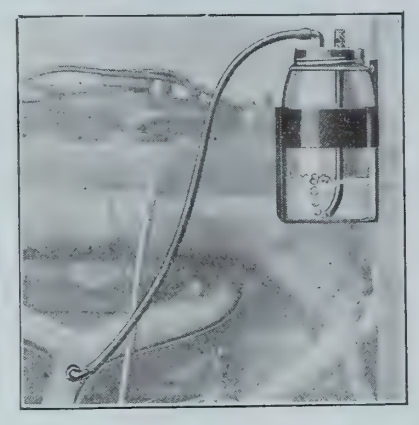
Manufacturers: Imperial Bit and Snap Co., Racine, Wis.



WORKRITE BOOSTER

THIS is a carbon remover and gasoline saver. This device provides a simple form of applying a principle used for years in gas engine work—that of mixing a small amount of water vapor with the gasoline to make a better combustion. It is especially beneficial with the poor grades of gasoline now obtainable. All motorists know how much smoother their engines run and how much more power they have on a rainy day, due to the moisture in the air. With this device you have the same effect all the time.

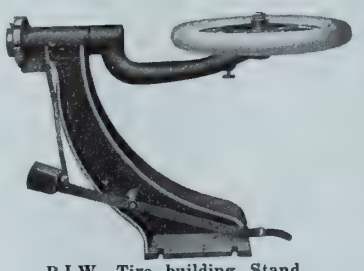
It consists of a metal frame for holding a quart jar containing water, which can be easily attached to the dash, engine or any convenient place. In the jar cap there is an adjustable inlet valve and an outlet connection. A rubber tube runs to the manifold, where it is attached with a one-eighth inch pipe thread connection. The air is drawn through the water by the suction of the engine and this vapor is mixed with the gasoline. All connections are made from brass, and cannot rust. The Workrite Mfg. Co., 5606 Euclid avenue, Cleveland, O., manufacture this device.



Workrite Booster Carbon Remover.

TIRE BUILDING STANDS

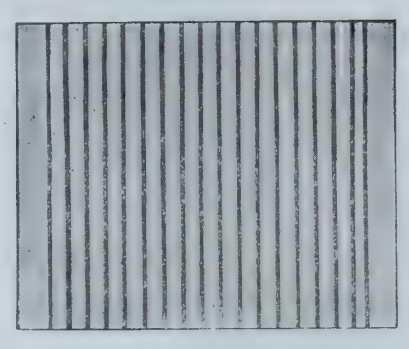
TWO tire building stands, of unusual weight and said to be, therefore, exceedingly durable, are now manufactured by the Peckstein Iron Works, Keokuk, Iowa. One type, S4, is constructed so that the ratchet holding the position of the arm is worked by the foot; with the other, S. G. it is worked by hand. The models weigh 450 lbs. and 435 lbs., respectively. The spider revolves on a turned shaft riveted into the arm and has three adjusting screws capable of handling cores for any sized tire from 28 inches to 44 inches in diameter. The points of these screws are case hardened. The ratchet catch on the spider is reversible, enabling the operator to work on either side, and it can also be thrown out to permit free turning of the spider and core. The arm is of cast iron with a 2½-inch cold-rolled shaft cast into it, giving it great strength. It is nicely balanced to enable ease of manipulation, and turns in a babbitted bearing.



P.I.W. Tire building Stand, Model S4.

WOOD SEPARATOR

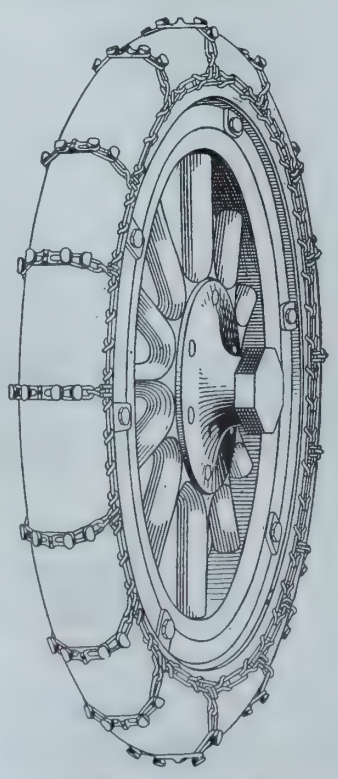
THE Ferry-Mark Mfg. Co., 2117-23 South Fourth street, St. Louis, Mo., is marketing a new wood battery separator, which is unique as a sawn-back separator.

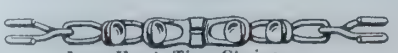


Ferry-Mark Wood Separator

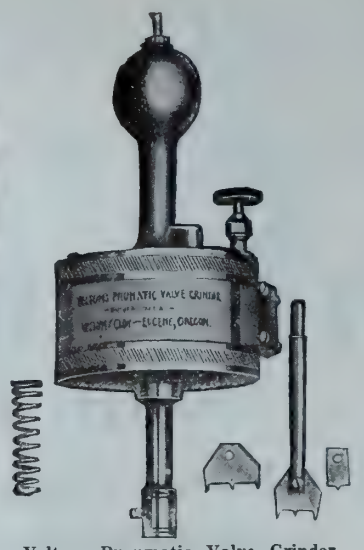
TIRE CHAINS

LOOP-HEAD Tire Chains manufactured by the Galesburg Chain Co., Galesburg, Mich., are claimed to be something new as an anti-slip device. The links may be effectively separated or joined. The links have loops at one end and laterally-projecting neck portions terminating in spherical heads at the other. They may be engaged and disengaged by passing their loop ends through the loops of co-acting links. The manufacturers claim for Loop-head tire chains more traction, more wear, more durable, more safe, more for the money; less wear on tires, less breakage, less welding, less useless links, less trouble to repair, less new cross chains, less repair links, less repair tools, less skidding.



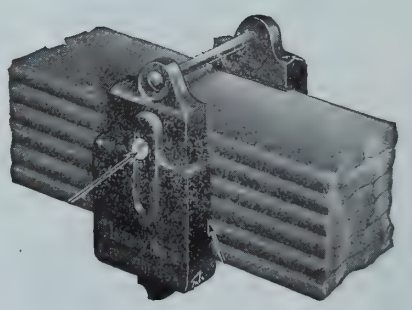


Loop-Head Tire Chains.

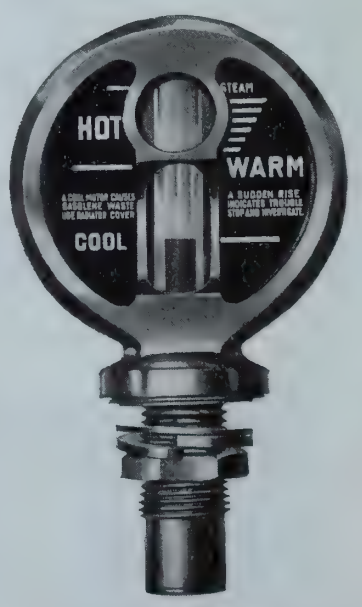


Veltum Pneumatic Valve Grinder.

Jones Tachometer.



Lazarus Spring Oiler.



Boyce Moto-Meter, truck and tractor model.

Deliveries will be made July, 1920, the manufacturers asserting that these are the real anti-skid chains, dealers should put on sale when the Parsons patent expires March, 1920.

VALVE GRINDER

THE Veltum Pneumatic Valve Grinder is now being placed on the Canadian market by the Warnock-Wirth Co., Chicago, Ill. This grinder has a speed of from 50 to 1,000 strokes per minute, thus eliminating going over the valve a second time for perfect seat. The valve cages, and all sizes of valves, can be ground with equal facility, it is claimed. With the Veltum machine it is also claimed that over-size valve stems can be easily fitted in the valve guides; that stuck valves can be readily relieved; delicate work can be accomplished; and that there is always plenty of power and a perfect control. The machine will operate on 15 to 500 lbs. of air. Chicago list price is $30.

JONES TACHOMETER

THE Jones Automobile Tachometer is an instrument which should prove most useful on tractors, where it is of the utmost importance that the r.p.m. of the engine be indicated to the driver. It is placed on the market by Jones-Motrola, Inc., 29-33 W. 35th St., New York. This tachometer is claimed to be the only centrifugal instrument yet produced, and was used in air-craft during the war with success. The scale on the Jones instrument is absolutely uniform, and covers the entire circumference of the dial. It is light in weight, is said to be not affected by temperature changes, and the entire mechanism is so simple that, once installed, it requires no further attention.

The frame and casing of the instrument are made of aluminum alloy, and black enameled. All rotating parts operate in ball bearings. The dial is black with white indications, or *vice versa*, reading from 500 to 2,500 r.p.m. or 1,000 to 5,000 r.p.m.—luminous or plain figures as desired. The instrument is of the flush mount type and can be set in the dashboard of any automobile. It is driven by a flexible shaft from the engine and is supplied complete with shafting and all necessary fittings.

SPRING OILER

THE Lazarus Manufacturing Company, of 778 Prospect Ave., Cleveland, O., have redesigned their Automobile Spring Oiler, making it adjustable to fit all cars from Fords to large trucks. Spring lubrication not only eliminates the undue wear on tires and motor parts due to rust-embedded springs, but also stops the squeak, prevents spring breakage and promotes full free action, which adds to the riding comfort of the cars. The manufacturers state that their Spring Oiler is automatic in operation, requiring no attention during an entire season. They are easily applied to any make of car and perform the same function as a shock absorber.

BOYCE MOTO-METER

THE Motometer Company, Inc., of Long Island City, N. Y., have introduced to the trade a new BOYCE MOTO-METER called the "Truck and Tractor Model."

This model has ben designed especially for severe service conditions, such as are met with on trucks and tractors.

The diameter of the thermometer tube is ½-inch, which makes breakage practically impossible. The frame of the instrument is very substantial, and the thermometer tube thoroughly protected. The casing is nickel plated, and the tube has a broad red column of indicating liquid easily seen, regardless of dust conditions so often met with in truck and tractor service.

PRESSURE REGULATOR

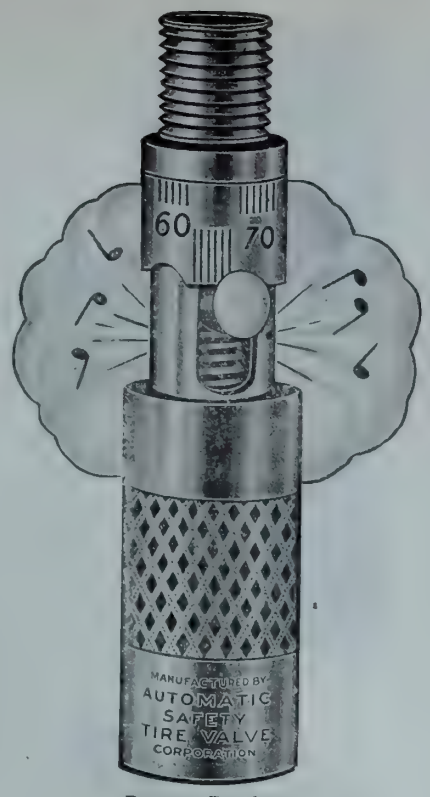
A NEW pressure regulator for tires, which "whistles when it's had enough," is announced by the Automatic Safety Tire Valve Corporation, 199-203 Eighth street, Long Island City, N. Y.

To apply screw automatic safety tire pressure regulators on your tire valve with your fingers, just as you would a dust cap. (Do not remove the valve inside.) Then tighten slightly with pliers.

Set collar to the pressure you desire; it needs no further attention whatever.

To inflate, attach hose connection in the usual manner; when air exhausts through port, shut off air as you have the pressure desired.

The Canadian trade can get a very profitable price by writing the manufacturers.



Pressure Regulator

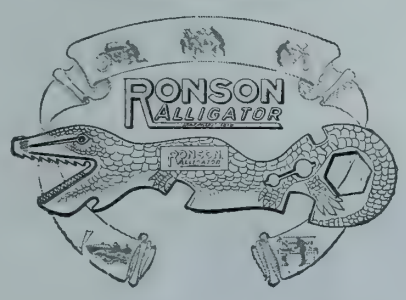
KLINCH-LINX

"KLINCH-Linx" are designed to replace one or any number of broken side links of tire chains. Simply slip into place and clinch with a hammemr or pair of pliers. If the chain hooks break the end links, replace broken links with "KLINCH-LINX."

Can be used in emergency to temporarily replace broken chain hooks. It is manufactured by American Auto Products Co., 1319 L Street, N. W., Washington, D. C.

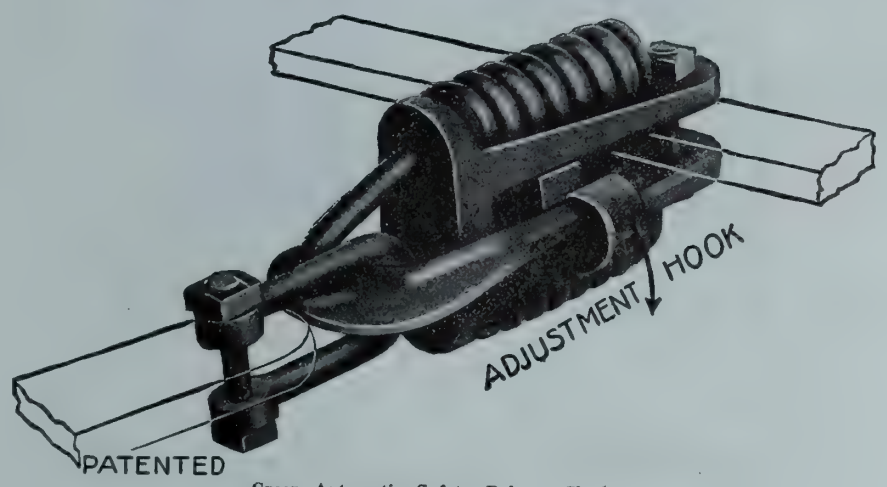
RONSON WRENCH

THE Ronson Alligator Wrench, a product of the Art Metal Works, Inc., Aronson Square, Newark, N. J., is a handsome tool which can handle eight different sizes of bolts and nuts.



GREER AUTOMATIC CLEVIS

THE Greer Automatic Safety Release Clevis for use with tractor plow is announced by the Erwin Greer Automobile Co., 1515 Wabash avenue, Chicago, Ill. The clevis, which weighs only 17 pounds, is a hitch that automatically uncouples the plow from the tractor when rocks, stumps, roots or other obstacles are encountered. It saves the plow, beam and tractor from breakage. It is instantly adjusted to two, three and four bottom plows. The manufacturers claim it is the handiest and simplest uncoupling device on the market. It can be attached and detached in five seconds, saves time, gasoline, labor, machinery and repair bills and eliminates jerks. A circular has just been printed illustrating and explaining the Greer Clevis. These will be mailed to all readers of CANADIAN MOTOR, TRACTOR AND IMPLEMENT TRADE JOURNAL who are interested and who will address the company as above.



Greer Automatic Safety Release Clevis.

CYLINDER HEAD

A NEW valve-in-head cylinder head for Fords of entirely new design to any other now offered has been put on the market by K. R. Wilson, 10-16 Lock street, Buffalo, N. Y. Its principal features are large valves, with direct port openings for gas to pass uninterrupted and without back pressure. Valves used are eight in number and are 1¾ inches in diameter, diameter of ports 1⅝ inches, or nearly double that of any other Ford cylinder head now offered.

Exhaust manifold cast integral and on left side of motor, exhaust gas passes only one right angle and one long sweeping bend before entering muffler, new exhaust pipe and muffler are furnished. Outlet water connection is located in centre of head so that cooling is equal on both ends, extra large water space is provided, insuring perfect cooling at any speed. Spark plugs are installed at an angle of 45 degrees to prevent fouling and are of S. A. E. type. Extension, adjustable, push rods having fibre tappets, also fibre rollers on rocker arm, are furnished. Lubrication of rocker arms is effected by a grease cup on end of each shaft which is drilled hollow. This head is particularly designed for commercial cars that require a whole lot more power to pull big loads on high gear, and is equally well adapted for all pleasure cars; also speeders. Can also supply light weight pistons and high speed camshafts at moderate price.

The workmanship and material is claimed to be first class in every way and every outfit guaranteed to "deliver the goods," and to supply more power than you can use with safety. Price complete, $60.00, f. o. b. Buffalo; deliveries started June 10.

Cylinder Head

AMERICA'S LEADING LUBRICANTS

HARRIS

TRADE MARK-REG U.S. PAT OFF

OILS AND GREASES

Harris Tractor Cylinder Oils

Are Made in Four Grades

Excello, Special, Heavy and Extra Heavy

From PREMIUM Pennsylvania Crude, acknowledged to be the best in the world by a careful process evolved from over 35 years' experience in the manufacture of Lubricating Oils.

HARRIS TRACTOR CYLINDER OILS have a high fire test and viscosity, fully meeting the exacting requirements of tractor lubrication.

Dealers and Jobbers Discounts Upon Application

A. W. HARRIS OIL CO.

MANUFACTURERS

326 South Water Street PROVIDENCE, R.I.

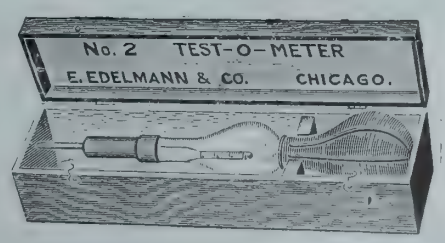
EDELMANN PRODUCTS

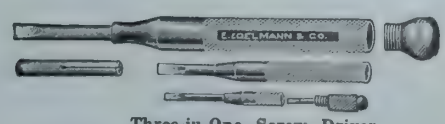
HYSLOP BROS., Toronto, are Canadian distributors for several products of E. Edelmann & Co., Chicago, which are well known in the United States, but only recently pushed in the Canadian market.

The "Break-Not" battery tester is a durable instrument which may be carried in the tool box without danger of breaking.

The No. 2 Test-O-Meter can be used for storage batteries of all kinds in connection with gasoline cars, or in testing the batteries in electric cars.

The Three-in-One screw-driver is a clever, handy and practical tool—three distinct screw-drivers in one.





Three-in-One Screw Driver.

BEATTY BROS.' BAND

Beatty Bros., Limited, Fergus, Ontario, have formed a band which, for size, enthusiasm and artistic merit, is one of the best "commercial" musical organizations in the Dominion. Two dozen members of the Beatty staff are in the band, and recently gave the citizens of Fergus, London, Port Stanley, and other Western Ontario towns a real treat.

SOCKET PLUG

THE Ford changeable socket plug is made of hard rubber and brass, and the manufacturers, F. W. Morse, 289 Congress street, Boston, Mass., claim that it will cause the headlights to burn uniformly and with an even steady 50 per cent. better light, whether car is running fast or slow.

SPARK PLUG WRENCH

A SPARK Plug Wrench has recently been placed on the market by the Stadeker Metal Specialty Company of Chicago, which, it is claimed, to a large extent solves the dealers' wrench problem. It is usually necessary for a dealer to carry several different size spark plug wrenches in stock, in order to be able to fit the various sizes in spark plugs. The Stadco No. 20 Wrench referred to above has four different size openings. One opening in the wrench will fit the Champion X and smaller sizes. The smaller opening fits the jam nut on the Champion X and some metric plugs. The largest opening fits the large shaped plugs like the Titan, while an intermediate size fits many plugs for which it is very hard to secure a wrench. Therefore this one wrench will fit with very few exceptions, every spark plug on the market. The price is 40c each in Canada.

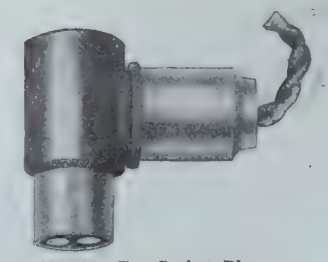
AIR COMPRESSOR

THE "Imperial Fourteen" air compressor is now on the general market, announces the Ingersoll-Rand Co., 11 Broadway, New York. There are four sizes and the capacity range runs from 3 to 45 cu. ft. per minute, at pressures to 100 lbs. per square inch. The small compressors can, however, be used for pressure requirements up to 200 lb. per square inch, the horse-power needed being, of course, slightly increased. They are single-acting machines of the vertical type built for belt drive. Where driven from line shaft, tight and loose pulleys are supplied; where the use of independent motor is planned they are ordinarily furnished as a unit complete with motor, endless belt and short drive attachment. In the latter case a hardwood base plate is included.

The machines are so balanced as to operate satisfactorily if bolted to any solid flooring, but where permanency of installation is desired the building of a concrete foundation is advocated. The smallest size is built with ribbed cylinder for air cooling where the service is intermittent and with water-cooled cylinder of the reservoir type for continuous operation. Large machines are water cooled only, employing the reservoir jacket system, except that in the case of the largest size, a closed jacket for connection to pressure system is optional. In this connection it is worth noting that the reservoir cylinder design affords unusually ample water capacity and that both cylinder barrel and head are cooled. The manufacturer states that a single filling of the water space will suffice for a 10-hour day's run.

MANIFOLD FOR FORDS

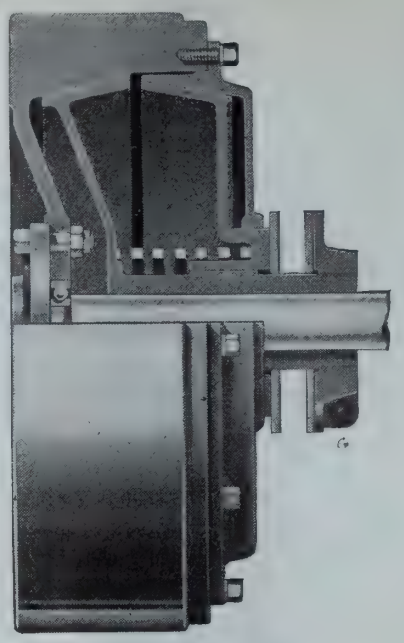
THE Anco Evenheat manifold for Fords is announced to make "high tension gas from low-grade gasoline." A third to a half more mileage is claimed by the manufacturers, the Anderson Co., South Bend, Indiana. The special feature of this manifold device, which lists in South Bend at $9.75, is the hot dividing well, or "hot spot," which completely separates the exhaust and intake channels, and is located centrally directly above the vertical section of the intake. Gasoline spray from the carburetor strikes this "hot spot" squarely and is transformed instantly into a fog of perfect gas—swept uniformly into all the cylinders along the easy bends of the device. The cooling effect of the intake air and vapor, always in direct proportion to the heat of the exhaust, is said to keep this "hot spot" constantly at the right temperature.



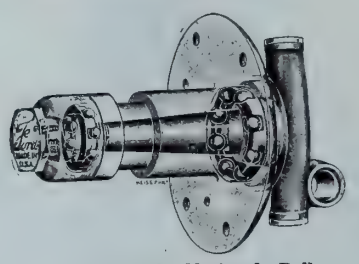
No. 170 Tee Socket Plug.

No. 171 Elbow Socket Plug.

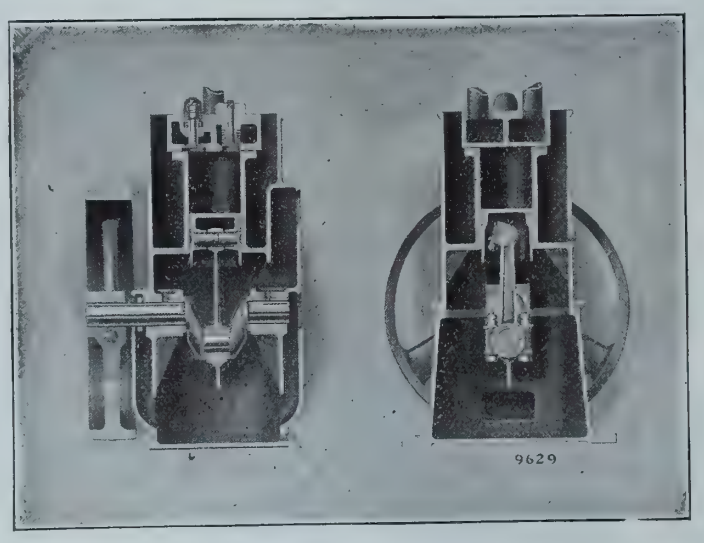
Stadco Spark Plug Wrench



Stouffer Tractor Clutch.

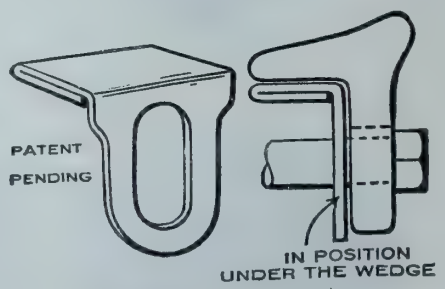


Goodrich National Ball Retainer for Fords

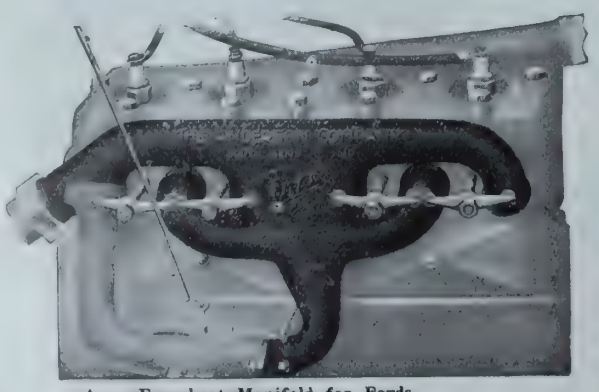


Ingersoll-Rand "Imperial Fourteen" air compressor.

Woodworth Lubricating Spring Leaf Cover



Ren Hold-tight Wedge Plates



Anco Even-heat Manifold for Fords

Self-Vulcanizing Tube Patches.

TRACTOR CLUTCH

THE Stouffer tractor clutch is manufactured now by the Toro Motor Co., Minneapolis, Minn. The manufacturers claim that the exceedingly large friction surface and capacity of spring combined with tapering friction enables this clutch to pull a horse-power and torque load far above other tractor clutches of same diameter without perceptible wear. It runs in oil. A man who has tried it out says:

"When you throw it in it does not grab, but picks up the load gently. At the same time it will not slip under the hardest pull, the reason for this being that when the clutch is thrown out the cones are drenched with oil and, of course, when they are let in again they are then working on a cushion of oil until the oil is squeezed out and they will slip enough to pick the load up without a jerk and at the same time will not wear."

BALL RETAINER

GOODRICH-LENHART Mfg. Co., Philadelphia, is marketing now a ball retainer for Fords—the "National"—which is claimed will "put miles into Ford front spindles." This device separates the balls so that each runs separately and freely in the raceway. It is claimed that friction is reduced, balls prevented from working out of race and riding on cone, and that the balls will be kept in line.

LEAF SPRING COVER

AN improved spring cover for the leaf springs of automobiles has recently been brought out by the Woodworth Manufacturing Corporation of Niagara Falls, Ont. This cover consists of a water and oil proof material having a felt pad inside, which is saturated with oil before the cover is put on. The cover is held in place with small straps about 2 in. to 2½ in. apart. The cover is adapted to enclose the spring from the clamps at the thick part to the end of the tapered leaves. It is claimed that these covers provide perfect lubrication throughout the full length of the spring; keep out all moisture and dirt and keep in the oil so that one oiling lasts for a year or more. These covers are made in special sets for Ford Cars which sell at $3.00 per set, and seven other sizes which fit all makes of cars. A list of cars showing the sizes of covers they require and the price is published in pamphlet form, and also in the form of a large two-colored wall hanger, furnished free to dealers.

WEDGE PLATES

HOLD-TIGHT Wedge Plates, manufactured by the Ren Automobile Supply Manufacturing Co., Preston, Ont., are designed to eliminate demountable rim trouble caused by stretched rims or worn lugs. If the rims stretch, wheels shrink and felloes sag between the spokes, there is a tendency for the wedges to lose their usefulness, inasmuch as they tighten to the side of the felloe, but do not tighten on the rim. This leads to rim squeaks and also allows the tire to work around the rim. These wedge plates, it is claimed, remedy such troubles.

TUBE PATCHES

THE Northwestern Chemical Co., Marietta, Ohio, have added to their NORWESCO "Chemically Correct" line of Automobile Utilities, two self-vulcanizing tube patches, Rubrback and Khaki Back. Rubrback Tube Patch is designed for repairing both punctures and blow-outs, and expands with the tire, preventing tendency of pulling loose when tire is inflated. Khaki Back Tube Patch is reinforced by a covering of Khaki Cloth. This patch is especially effective where a non-stretching repair is necessary. These patches are effective under extreme heat or cold. They are packed in screw-top containers, two sizes, and each outfit contains sufficient cement and emery cloth for making numerous repairs.

NEW 12-20 H.P. OIL PULL

WITH the addition of the 12-20 h.p. size, the Advance-Rumely Thresher Company, of La Porte, Indiana, now has a size of oil-burning tractors which fits Eastern farms and farming conditions. The Advance-Rumely Thresher Company has been building oil pulls since 1910, the first oil pull tractors going into Western Canada in that year to help open up those territories. This new model is rated on the S.A.E. plan—the advertised rating 80% of the maximum horse-power developed on draw-bar and belt. The 12-20 will handle up to four mouldboard plows, depending upon size and soil conditions. On the belt it will handle a 22 inch thresher fully equipped, and to its full capacity. The Toronto branch of the company is located at 48 Abell Street.

HAS DESIGNED MANY CARS

FEW automobile engineers can equal the record of J. G. Perrin, who has been appointed assistant general manager and chief engineer in charge of production of Willys-Overland, Limited, Toronto.

Like a good many men who have made their mark in America's third greatest industry, Mr. Perrin began his career in the bicycle business. He started with the H. A. Lozier Company, bicycle manufacturers, Toledo, Ohio, as a draughtsman. Shortly afterwards he became chief engineer of the company. In 1897 the Lozier steam carriage made its appearance and was the first of many famous cars to be designed by J. G. Perrin. The first fore-door car built in

J. G. PERRIN.

America, and the first streamline car were Perrin productions. Lozier cars of Perrin design figured prominently on the speed ovals of the world, and have captured "first money" time and again. Among the notable Lozier winnings was the Vanderbilt cup in 1911. Following this, Mr. Perrin was appointed vice-president and chief engineer over the combined works of the Lozier Motor Car Company of Detroit, Mich., and Plattsburg, N.Y.

After twenty years' service with the Lozier Company Mr. Perrin became chief engineer of the Timken Detroit Axle Company, where he remained until the war, when he was called to Washington as a member of the Aircraft Production Department. Through this work he came into touch with the aircraft division of Willys-Overland, Limited. At the instance of that Company, and with the consent of the U.S. Government, Mr. Perrin assumed charge of the aircraft division of Willys-Overland, Limited, at Toronto. Before the close of the war his company were producing five complete eight-cylinder Sunbeam Arab airplane engines in an eight-hour working day. In this work Mr. Perrin achieved the distinction of winning the commendation of the Air Board, which was prompted by the high quality of the workmanship exhibited in the Canadian-built, British-designed airplane engines.

He is now devoting most of his time to the perfecting and production of the new "Overland 4" car, a light automobile that is expected to embody improvements of a rather revolutionary character.

Western News

MANITOBA

ST. ANNE.—Benoit and Delorme is a new implement firm started here.

BOISSEVAIN.—Truax and Aylesworth have opened a new garage.

WINNIPEG.—The Freeland Tank Co., has moved its plant from Halbrite to Winnipeg.

WINNIPEG.—The Commercial Credit Co. of Canada, has opened a branch office here.

NEWDALE.—Petruske and Broskin, of the Newdale Garage, have sold out to Titus and Brennell.

WINNIPEG.—Owners of tractors who allow their machines to damage the pavements will be prosecuted.

WINNIPEG.—R. Lionel Halter and Carl T. Whitcomb comprise the firm which has started in the auto accessory business, 637 Portage Avenue, as the Canadian Tire Service Co.

SASKATCHEWAN

DRUMHELLER.—Algar and Parkinson have opened a new garage.

PROGRESS.—The Imperial Oil Co., has completed a new warehouse here.

GLENSIDE.—Davis Bros. have taken over the automobile business of J. A. Heckle.

CREELMAN.—The Creelman Motor and Tractor Co., is a recently-incorporated concern.

RIVERHURST.—A. F. Brunner has built a new garage and taken on a Chevrolet agency.

ROULEAU.—A serious fire threatened Jack Arnold's garage, but heroic efforts put out the blaze. Damage: one car rug.

WADENA.—Harris and Co., auto and tractor dealers, have changed their name to MacPherson, Harris and Co., and will enlarge their business.

ELBOW.—G. Christianson, who was burned out at Keeler, Sask., last spring, has broken into the game once again, and opened up a fine new garage here.

ALBERTA

BARONS.—Black's Vulcanizing Works suffered a severe fire loss.

VANGUARD.—J. E. Patterson, well-known implement dealer, died recently.

TABER.—J. B. Turney has sold his interests in the Taber Motor Co.

RED DEER.—P. D. Wilson has started an auto and accessory business.

CUPAR.—Hebbert and McLey, implement dealers, have bought out David Laidlaw.

MEDICINE HAT.—The Western Vulcanizing and Tire Works has commenced business.

MEDICINE HAT.—The Canadian Western Steel Co., and the Redcliffe Alberta Rolling Mills have amalgamated.

BRITISH COLUMBIA

NANAIMO.—Dealers for all brands of cars report themselves "sold out."

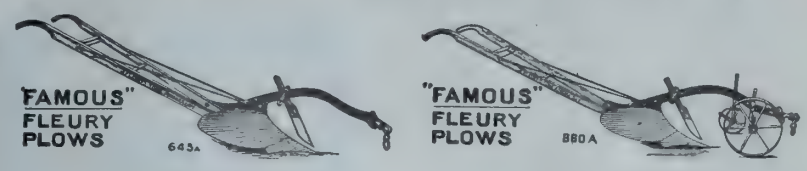
KENOWNA.—The Bankhead Orchard Co. has taken the agency for the Cletrac.

CHILLIWACK.—The haver Co-operative Motor Co., Ltd., has begun business.

VANCOUVER.—T. J. Sullivan has returned from the Sullivan-Taylor Motors, Ltd.

CHILLIWACK.—The Chilliwack Vulcanizing and Tire Co. is a new automobile and accessory firm here.

FAMOUS FLEURY PLOWS



A HIGH STANDARD MADE HIGHER STILL

Deep and abounding satisfaction surrounds the sale and the use of practically every Plow that leaves the Fleury factory.

Even if we felt disposed to do so, we could not lower the quality of Fleury Plows. In this respect we are not free agents, because public opinion has established a standard for everything bearing the name "FLEURY." We dare not fall below the high estimate that has been formed of us as Plow Manufacturers.

Every dealer in Fleury Plows knows that his customers come to him with the highest possible expectations. He knows that each Fleury Plow he sells forms another link in the bond of confidence: for almost invariably the Plow not merely satisfies his customer, but greatly pleases him. He gets more than value for his money.

Naturally, knowing what is expected of us, we feel a deep sense of responsibility. We realize that quality and performance are all-important. And so, a naturally high standard becomes higher still because of the complete confidence bestowed upon us by the public.

Our Dealers, too, are inspired to make greater efforts each season; and each season their business grows accordingly. In order to satisfy the constantly increasing demand, thousands more of the famous Fleury Plows are made each year.

THEY LEAD EVERYWHERE!

J. FLEURY'S SONS - AURORA, ONT.

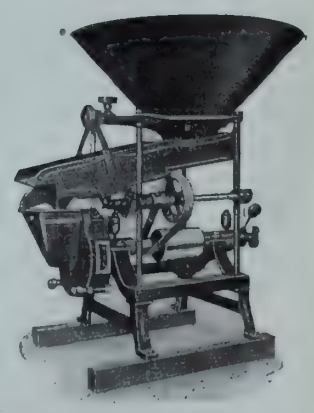
TRADE MARK S.V. REG

"VESSOT" Quality

is a valuable asset to business

"VESSOT" FEED GRINDER

sets the pace for grinding, efficiency and economy



Vessot Grinders have obtained medals and highest awards wherever exhibited, Chicago, Paris, etc.

They have become world-famous for the efficiency and durability of their grinding plates.

Write for our Agency Proposition. We pay good commissions

Grinder with Elevator and Bagger

Inventors and Manufacturers

S. Vessot & Co.

JOLIETTE, QUE.

Sold Exclusively in Canada By

International Harvester Co. of Canada, Limited

Branches: Calgary, Edmonton, Lethbridge, North Battleford, Regina, Saskatoon, Yorkton, Brandon, Winnipeg, London, Hamilton, Ottawa, Montreal, Quebec, St. John.

RADIATOR SHUTTER

THIS product of the Metal Auto Parts Co., Des Moines, Iowa, is designed to regulate, in cold weather, the passage of air through and around the radiation of a car. It is a stamped sheet metal device made up of a number of movable shutters carried in a frame of such size as to fill completely the opening in the outer shell of the radiator. The blades are controlled from the steering column. Installation is said to be very simple. Benefits claimed are: quicker starting of engine in cold weather; closer carburetor adjustment, more efficient combustion of low-grade fuel. It will fit practically any car with a flat-fronted radiator, having parallel side-walls and a removable shell.

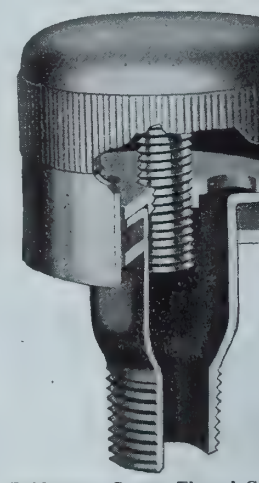
Universal Radiator Shutter.

SLACK ADJUSTERS

THIS is a little device designed to save the chains and tires. The inventor and manufacturer, F. W. Trantum, Jamestown, N. Y., writes us: "It takes out the slack from the cross chains and at the same time will allow the chains to creep on the tires, which are the conditions necessary for best results. One end of the spring is attached permanently to the chain when first applied so it is always there when needed, and does not require any other attention than to hook up when being put on. It also cannot be lost."

NEW GREASE CUP

THIS cup has a pressed steel baseto which a heavy leather washer is securely attached. The cap is drawn steel with a screw electrically welded in its centre, which is threaded its entire length so that it is claimed practically 50% more grease can be delivered to the bearing than with other makes. The inside of the cap is smooth and fits over the leather washer tightly enough to prevent the cup from rattling off, and will prevent the grease from leaking between the washer and cap. This cup is used on circulating pumps of automobiles without any danger of the water backing up into the cup and washing the grease out around the edges as happens when the threaded cup is used. The cups are made by the Garrison Company, of Bridgeport, Conn., in four sizes, No. 000, No. 00, No. 0, No. 1 and cost 20c., 25c., 40c. and 60c., in plain steel.



Bridgeport Centre Thread Grease Cup.

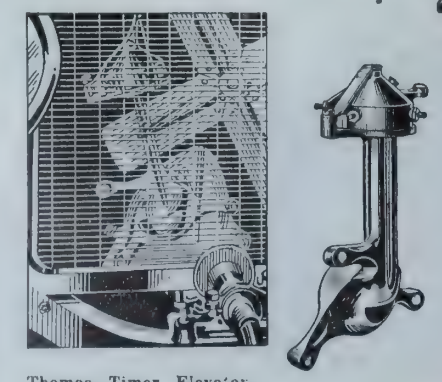
P. V. AMMETER

THE special and distinctively new feature of this ammeter, manufactured by the Roller-Smith Co., 233 Broadway, New York City, is that it is claimed to be "Universal"—that is, can be used on any make of car, any make or type of system, or any voltage system. It is designated as the flush type, black finish, range 30-0-30 amperes. Diameter of body 2 in. Diameter of hole required in dash 2 1-16 in. Diameter overall 2⅝ in. Depth behind flange ⅞ in. Mounting holes S.A.E. standard. Each ammeter is furnished with full supply of mounting screws and nuts and washers. The "Universal" ammeter can be connected in the starting circuit if necessary as in the case of certain single unit systems, and the cranking current, no matter how heavy, will not injure it.

Roller-Smith P.V. "Universal" Ammeter.

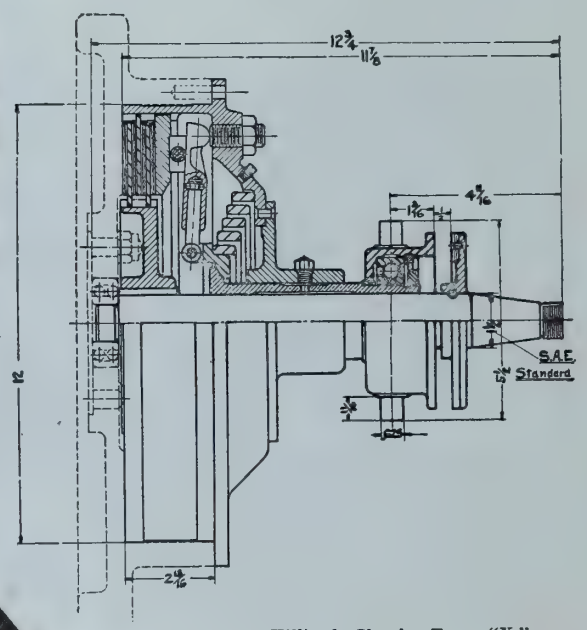
TIME ELEVATOR

THE "Thomas" Timer Elevator attachment, manufactured by the Thomas-Andrews Corporation, Waukegan, Ill., is a device claimed to do away with Ford car trouble due to timing or wiring. To instal, it is not necessary to alter the motor, or bore any holes, not even in the cam shaft. The timer is inverted when placed on the elevator, so as to shed dirt and water. With this device, it is stated, the timer wires can be carried away from grease, oil, water and dirt. The timer can be removed easily for cleaning. The Northern Electric Co. are Canadian distributors.

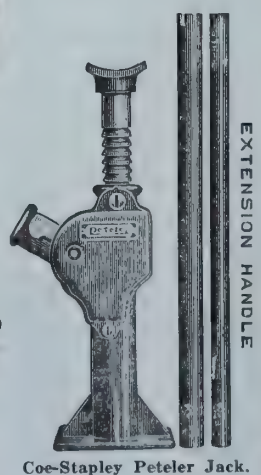


Thomas Timer Elevator, showing installation. Thomas Timer Elevator.

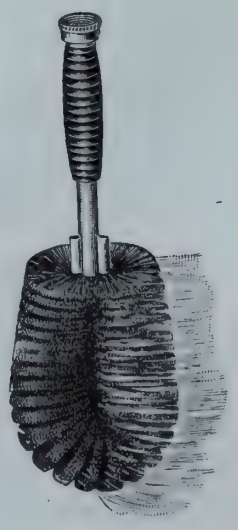
Universal Pet-cock Opener.



Hilliard Clutch, Type "X."



Coe-Stapley Peteler Jack.



Sanitax Fountain Auto Brush

PET-COCK OPENER

THIS is a tool to open and close or clean the oil pet-cocks of the Ford engine. The end of the rod is looped in such a way that it catches the handle of the pet-cock. If the pet-cock is clogged up the needle can be inserted and it is long enough to run clear through the cock and into the transmission case. The dealer's name can be stamped on the handle. The manufacturers are Metal Auto Parts Co., 626-628 E. Locust Street, Des Moines, Iowa.

MASTER WRENCH

THE new Billmont Master Wrench, manufactured by the Edgar C. Guthard Co., 861 E. Ohio St., Chicago, is essentially a universal socket wrench and is designed to do the work of a dozen or more wrenches. It claims to be the only wrench on the market, for example, that will reach the fourth connecting rod nut on a Ford car with ease and "spin it off." The Billmont claims to "spin off" with ease those nuts and bolts that every mechanic knows are so located that they are difficult to get at with an ordinary wrench. The Billmont Master Wrench is so constructed that it can be held in place with one hand (a knurled handle keeps it from slipping) and operated with the other, thus overcoming the difficulty of the ordinary wrench in keeping the jaws squarely on the nut and "spinning the nut" instead of getting only a quarter turn with each fitting of the wrench jaws.

DUST-PROOF CLUTCH

A CLUTCH recently placed on the market by the Hilliard Clutch and Machinery Co., Elmira, N.Y., is specially suited for 3½ to 7-ton trucks, and for farm tractors where amidship transmission mounting makes a dust-proof type necessary. This type "X" clutch requires a special fly-wheel which serves as a part of the clutch housing and provides one of the friction surfaces. The special features of the "X" and "X U" clutches ("X U" is for unit power plants where clutch is enclosed) is their excessive amount of power in a very small and compact space. They are exceedingly simple and rugged in construction, have few parts and can be operated either as oil bath or as dry friction types. They have a compensating ring, or equalizing ring, to which the operating levers are attached, which insures uniform pressure and makes a very smooth-acting clutch. The adjustment is obtained conveniently and quickly by means of the three pressure screws and any lack of uniformity in adjustment is automatically taken care of by the compensator ring mentioned.

SANITAX AUTO BRUSH

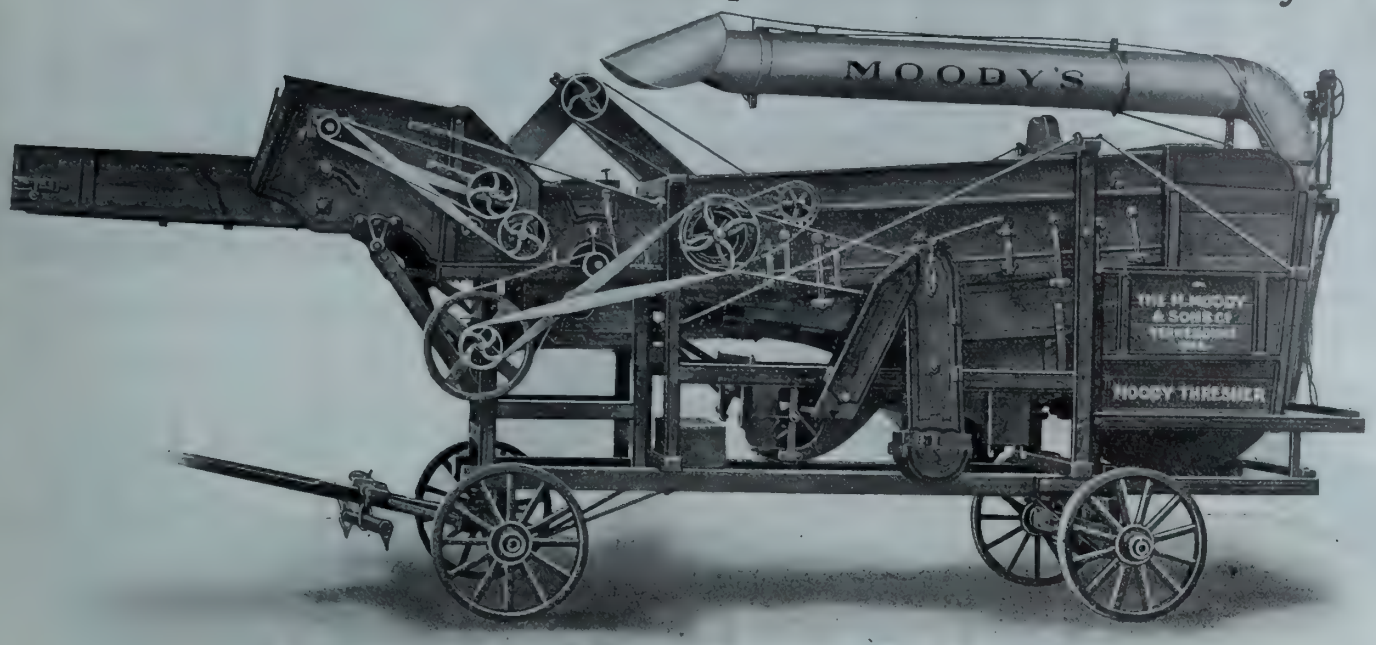
THIS brush is designed to facilitate the washing of the wheels and running gear, particularly. The brush can be attached to an ordinary hose, and when the water is forced through a spray nozzle it is thus cleansed. It has a very long handle, exceedingly thick bristle hair, which can be replaced at small cost when worn. In order to remove mud, which has exceptionally hardened on the body of the car, the brush coil may be removed and the full force of a needle spray applied direct. It is manufactured by the Sanitax Brush Co., 2333 S. Wabash Avenue, Chicago, Ill.

PETELER JACK

THIS Jack has a telescoping handle by means of which it can be slid to any point under the car. The handle is detachable. The lifting action allows ⅜-in. lift with each stroke, and a weight of 3,000 lbs. can be lifted. A tap of the handle operates a small lever which reverses the action, and permits lowering. Manufacturers are: Coe-Stapley Mfg. Corporation, 136 Liberty Street, New York City.

A Thresher with a Reputation

75 Years' Experience Behind a "Moody"



Specifications of No. 2 Threshers

Cylinder — Moody's Channel Bar 30" x 17" dia.

Separator — Width 40", length 8' 10".

Capacity — 500 to 1,000 bushels in oats per day.

Power Required—14 to 15 horsepower (gasoline).

Speed of Cylinder—Between 1,100 and 1,150 R.P.M.

Weight — Fully equipped, with truck, 4,400.

And, as a result of our long experience we have to offer to farmers a thresher unequalled for strength, ease of operation and durability.

Every implement dealer realizes how necessary it is to carry lines that have a real, genuine reputation behind them. The Moody thresher is manufactured by a firm having had 75 years' experience in building threshers, and where could be found a better selling point?

Then again, the saving of grain made possible by a "Moody" increases production. More so than the ordinary machine. It thoroughly cleans the grain. Every foul seed is caught and bagged—the ground you thresh on is as clean as your fields.

Are the farmers in your territory doing their own threshing?

Here's what one farmer in New Brunswick thinks of the "Moody" as an individual thresher:

"Dalhousie Jct., N.B., March 8th, 1919.

"Matthew Moody & Sons Co.

"Gentlemen—Please send me a book of the machines you make. Your threshing machines are the best that we ever had in our barn during the last 40 years. I have seen a great many different makes of threshers, but none of them come up to the Moody. Some of them thresh as well as yours, but the grain goes with the straw and they don't last."

"Yours truly,
"W. J. THOMPSON."

WRITE US FOR OUR DEALERS PROPOSITION

Specifications of No. 3 Threshers

Cylinder—Moody's Channel Bar 30" x 17" dia.

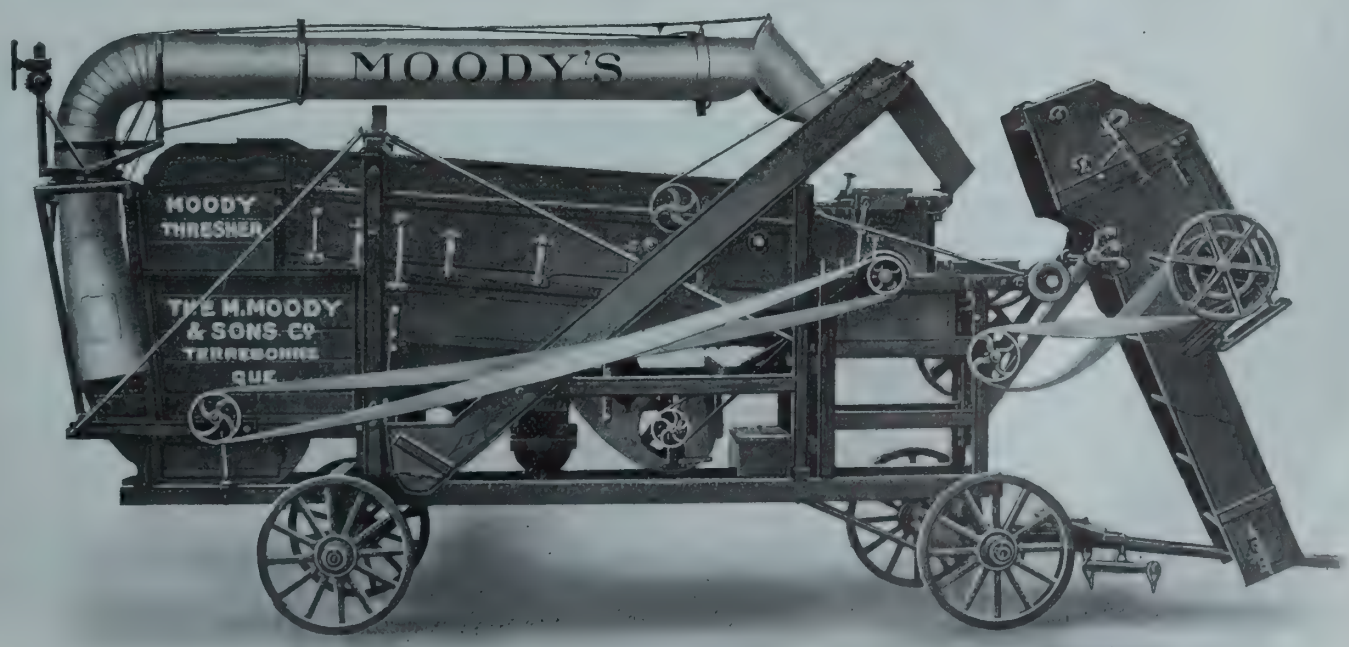
Separator—Width, 46½"; length, 9' 9".

Capacity—600 to 1,200 bushels in oats per day.

Power Required—16 to 20 horsepower (gasoline).

Speed of Cylinder—Between 1,100 to 1,150 R.P.M.

Weight — Fully equipped, with truck, 4,600 lbs.



The Matthew Moody & Sons Company

Head Office: Terrebonne, Que.

Represented in the West by Messrs. Francour Bros., Camrose, Alta.; New Home Machinery Co., Saskatoon, Sask.; Mitchells Hardware Co., Brandon, Man.

CANADA GETS THE

CHASE

Chase 9-18 in a big way Corporation

What it will Do

The Chase 9-18 Farm Tractor, formerly made in Syracuse, New York, is not an experiment; for years it has been proving its worth in many countries—the United States, England, Scotland, France, Australia, Cuba, South America and Canada.

SPECIFICATIONS

Plowing Capacity. Two 14 inch plows of any standard make, under all conditions, and three 12 inch plows in stubble or favorable soil conditions.

Transmission. Chase, two speeds forward, one reverse; sliding gear, in oil-tight dust-proof case. Gears operate in oil. Hyatt bearings throughout.

Speed, Miles Per Hour. High, 2½; Low, 1½; reverse, 1. Speed may be changed by a simple governor adjustment.

Belt Power. All forms of farm belt work requiring up to and including 18 horse-power.

Motor. Chase Buda long stroke, heavy duty type, 4 cylinder, 4 cycle, water-cooled.

Ignition. High tension magneto, having set spark equipped with impulse coupling for starting. No batteries.

Wheels. Front wheel or steering wheel spring mounted, 36 inches in diameter, 8 inch face. Equipped with front extension wheel, 34 inches in width Rear driving wheels 48 inches in diameter. 12 inch face. Equipped with rear extension rims, 22 inch face each.

Kind of Fuel. Gasoline, distillate and kerosene.

Number of Wheels. Two driving in rear, one steering in front; with extensions applied to both front and rear wheels tractor becomes a roller covering the entire ground. 84 inches in width.

Dimensions. Length, 11½ feet; width, 68 inches; height, 57 inches

Weight 4700 pounds.

Motor Clutch. Internal expanding shoe located in engine fly wheel. Bierman type.

Brake. Powerful contracting band applied to bull pinion shaft.

Cooling System. Enclosed radiator equipped with fan shroud and powerful cooling fan. Water circulated by centrifugal water pump, having large shaft and bearings.

Carburetor. Automatic float feed All air going to the carburetor is cleaned and thoroughly heated by a special cleaning and heating device.

Lubrication. Automatic splash system and force feed pump, giving positive lubrication for motor.

Draw Bar. Adjustable.

Two 14-inch plows, of any make, can be pulled under all conditions; three 12-inch plows can be pulled in favorable soil conditions. On the belt it will comfortably handle all forms of farm work up to and including 18 horse power.

See this Wonderful Tractor at the Canadian National Exhibition

The Chase 9-18 Farm Tractor will be shown at the Canadian National Exhibition at Toronto. See it in technical use. Get details of construction, operation, and our ***Dealer Proposition,*** one of the most liberal ever offered.

Chase Tractors Corporation, Limited

28 Atlantic Avenue,
Toronto, Ont.

CHASE TRACTOR

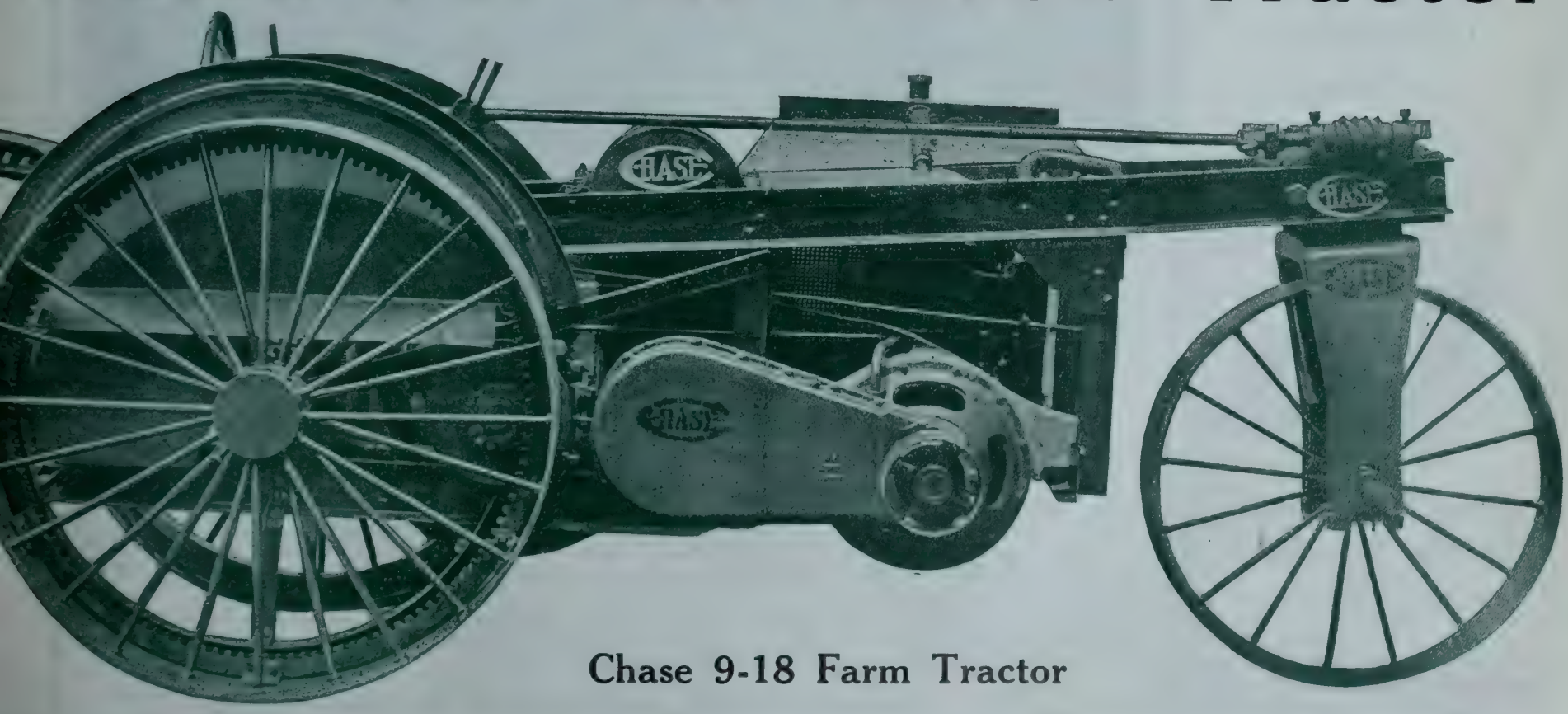
Farm Tractors are to be manufactured in Canada, by an all Canadian company, Chase Tractors Limited, 28 Atlantic Avenue, Toronto.

The Chase Solves the Dealer's Problem of What Tractor to Handle and the Farmer's Problem of What Tractor to Buy

Dealers Wanted

Dealers who take hold of the Chase Tractor will receive decidedly liberal treatment. An aggressive sales and advertising policy has been inaugurated. It is broad-gauged, sound and progressive. The work of dealers will be supplemented by the most intensive efforts on the part of the manufacturers.

Watch For the Green Tractor



Chase 9-18 Farm Tractor

Dairy *and* Household Supplies

MILKING MACHINES

THE milking machine is here to stay. It is a recognized implement at the present time and it has passed the experimental stage in many cases. Therefore, the person who doubts the advisability of such a machine might just as well doubt the advisability of a separator or a gasoline engine. It needs an intelligent man to operate a milking machine, but for that matter it requires intelligence to operate any kind of a farm implement. The milking machine is a great labor-saving convenience.

SELLING NOTES

HOW many dairy farmers ever fall down in their payments? It seems to us that these men are about the best business prospects we have. Their money is sure and comes in regularly. Every man who uses a good cream separator is sure to be a good financier.

A little tip to a cream separator user on how to balance his machine, the necessity of a solid base and where to look for dirt, ought to be received well when you happen to be on the premises. Of course a great many farmers think they know all about it, but if you are shrewd, you can say it right. And it pays you.

Now that winter is in sight and there is always plenty of fall work to do, it might be well to suggest some home conveniences that the farmer should instal before cold weather. An attractive card suggesting this would hang well in the office.

Where electric power is available, many farmers are installing electric washers. These lessen the wife's work greatly in these days of short help. Gasoline driven washers are common.

CREAM TESTS VARY

THE farmer who sells cream is sometimes surprised at the variation in the test reported by the creamery. In the early part of the summer the tests tend downward. The farmer should not assume that a variation in the tests means either carelessness or dishonesty on the part of the cream buyer. L. W. Morley of the University of Missouri College of Agriculture, mentions several factors which affect the richness of the cream and which make a variation in the test from time to time.

First of all the richness of the cream varies with the richness of the milk. In early spring and summer there are more fresh cows, which results in a lower testing milk and as a result of this the cream goes down in proportion. A herd of cows may produce milk averaging 4 per cent. in the fall and in the early spring and summer the average will run as low as 3.6 per cent. This much difference in the richness of the milk will cause a variation from 5 to 8 per cent. in the cream test.

The next most important cause for variation is the speed of the separator. The faster the separator is run the larger the proportion of skim-milk and the smaller the proportion of cream. Consequently the high speed yield a richer cream. If a machine that is supposed to be turned 60 revolutions a minute is reduced to 40 the cream will be considerably lower in the test.

Another important cause of variation in cream tests, and sometimes the most important, is the amount of water or skim-milk used in flushing out the bowl. The difference of a pint used will make a noticeable difference in the test of the cream. A difference in the temperature of the milk separated will also have some effect. Some separators are more sensitive to temperature than others. With some a difference of 20 degrees in the temperature of the milk when separated will make a difference of several per cent. in the test without affecting the thoroughness of the separation to any marked extent. It should be understood that these variations occur not as a result of more or less of fat in the skim-milk but as a result of a larger proportion being taken out in the form of cream.

COW TESTING PAYS

A GOOD example of what cow testing is doing to help dairy farmers to cull unprofitable milk producers is shown by the experience of a dairyman who reports the results of his work in R. O. P. work. He found that one cow was paying him $2.40 for each dollar's worth of feed, while another returned only 58 cents. This dairyman lost no time in selling the poor cow, and five others which showed by test that they were not paying for the feed they consumed. This year he is producing milk at less cost, thus increasing his profits. He writes, "I have cut down on the feed cost by eliminating the boarders, and can still further reduce it by using more clover and alfalfa than was available last year."

Mr. Dealer!

IF

Price
Quality of Material
Workmanship
Close Skimming
and
Easy Turning

are considered by your customers in buying a Cream Separator, then we claim that the

Sanitary King

is the best buy in Canada to-day. Write for prices and terms.

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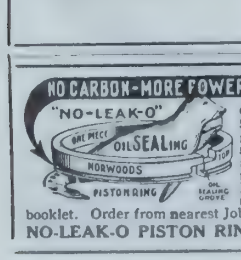
King Separator Works of Canada
Limited
Bridgeburg or Whitby, Ont.



On market 5 years. Over 5,000,000 in use. Every set guaranteed. Popular thru service. Don't rebore cylinders. "NO-LEAK-O" makes good when others fail. Made different. Give results no other ring can. Write for booklet. Order from nearest Jobber, or write direct.
NO-LEAK-O PISTON RING CO., Baltimore, Md.

There is thresher-selling profit for dealers in the tendency towards individual outfits. Below is one of our recent thresher advertisements to the farmers. Meet the modern move half way. Tie to International threshers.

Delays Are Costly

THERE is but one time to thresh grain. What assurance have you, unless you can use your own threshing outfit, that your grain will be threshed when that time comes?

To depend on custom threshing is more or less of a gamble. Remove every element of chance by purchasing and using an

INTERNATIONAL THRESHER

TO own an individual threshing oufit makes you independent. It takes a big burden off the shoulders of the women folks who otherwise must prepare food for a big crew at a heavy expense to you. It enables you to choose your own time for threshing, and cheat the weather of the toll it takes when grain is kept waiting for the custom thresherman.

The money you lose by not owning one of these threshers would soon pay for it. Hooked up with an International or Titan kerosene tractor, your thresher finishes the job quickly and thoroughly—no waste—no loss.

For information about details of construction, quality of work, steadiness of operation, special equipment, or, in fact, any other feature connected with these machines, write the nearest branch house below or see a nearby International agent.

INTERNATIONAL HARVESTER COMPANY
OF CANADA LTD

WESTERN BRANCHES—BRANDON, WINNIPEG, MAN., CALGARY, EDMONTON, LETHBRIDGE, ALTA., ESTEVAN, N. BATTLEFORD, REGINA, SASKATOON, YORKTON, SASK.
EASTERN BRANCHES—HAMILTON, LONDON, OTTAWA, ONT., MONTREAL, QUEBEC, QUE., ST JOHN, N. B.

PIONEER IMPLEMENT MAN DIES IN WINNIPEG.

AFTER a business career extending over forty years, William Eddie, one of the best-known western Canadian implement business men, passed away, practically in harness, July 4, in Winnipeg. Mr. Eddie had been attending to business at his office, corner of Princess and James streets, almost up to the moment of his fatal illness. On his way home—he resided at 284 Stradbrooke street—he called at the Seymour hotel and, evidently overcome, had entered one of the rooms on the ground floor of the building. It was there that he expired—his body was found lifeless on Saturday morning.

Mr. Eddie had been subject to heart affection, and the immediate cause of his death was hemorrhage. He was a native of Dunnetter, Kincardine, Scotland, and was born in December, 1846. He is survived by his wife, one son, William, morality inspector of the city police force, one daughter, Mrs. Walter Scott, 705 Elgin avenue, and sisters: Mrs. Thomas Thompson of Port Hope, Ont., and Mrs. Alex. McLennan, of Toronto.

Mr. Eddie came to Winnipeg as agent for the John Watson Implement Manufacturing company in 1879; five years later he accepted a position as traveller for Western Canada of the Massey Manufacturing Company, and he continued in this position until 1906, resigning to establish the business on his own account, which he successfully conducted up to the hour of his sudden call.

As an implement dealer, possibly no man was better known throughout the entire Western territory than Mr. Eddie. Long before the railroad service was established on anything like its present basis, his acquaintances among the Western farmers and implement firms were numerous. Before the railroads were built, he travelled by horse and rig, and, for instance, on several occasions has made the journey in this way from Winnipeg to Prince Albert and other distant points. Mr. Eddie was always noted for his sterling integrity and all-round generosity in his business transactions and his friends and acquaintances throughout the wide territory he had covered were numerous.

FARMERS BEST BUYERS

FARMERS are coming into their own insofar as the possession of motor cars is concerned. During the last five years the increase in the number of cars owned by farmers has been phenomenal. Statistics contained in the report of the Department of Highways of Ontario for last year testify as to the many farmers that are replacing their horses with the motor car for pleasure and utility.

The report of the Department shows that of 101,599 passenger cars owned in Ontario last year, 64,900 of them were owned in towns, villages and townships, and only 36,699 in the cities. Of the number owned in the cities less than half were in Toronto, or 17,171. There was a total registration of 109,374 cars in the Province, including 7,529 motor trucks.

It is also interesting to note in an analysis of the occupations of the owners that 37,758 of them are farmers and drovers, which far exceeds the number owned by any other class.

GENERAL MOTORS' GROWTH

IN order to keep pace with the growing demand for General Motors cars in Canada, the corporation is building extensive manufacturing plants in Walkerville, Ontario. The enterprise is being incorporated as Canadian Products, Ltd., Division of General Motors of Canada, Ltd. At the outset motors and axles will be manufactured for McLaughlin-Buick, Chevrolet 490, Chevrolet FB., and Oakland Six cars, and other parts and other models will be taken on later. The construction of the plants is already well under way and temporary offices were opened on the first of July in the motor plant, where all purchasing of equipment and materials and the employment of personnel will be handled. Major Howard E. Blood is General Manager.

The Walkerville development is part of a larger Canadian program of the General Motors, evidenced by the recent formation of the General Motors of Canada., Ltd., of which R. S. McLaughlin is President, with headquarters at Oshawa, Ont. The assembling of General Motors cars will continue to be handled at Oshawa as heretofore.

SOME FORD FORTUNES

HENRY FORD, and his son Edsel Ford, are now practically absolute owners of the Ford Motor Company as the result of the consummation of the deal, James Cousens, Mayor of Detroit, and formerly connected with the management of the company, being the only stockholder, outside of the Fords, who retains an interest in the business.

Other minority stockholders, the amount of stock they held before selling, and the value follow:

John F. Dodge, 1,000.....	$12,500,000
Horace E. Dodge, 1,000....	12,500,000
J. W. Anderson, 1,000....	12,500,000
H. H. Rackham, 999.....	12,487,500
David Gray, 525.....	6,562,500
Philip H. Gray, 525.....	6,562,500
Paul R. Gray, 525.....	6,562,500
Alice Gray Kales, 525.....	6,562,500
Mrs. A. P. Hauss, 20.....	250,000

CANADIAN WAGON MAKERS ADOPT NEW U.S. STANDARD

REPRESENTATIVES of the wagon manufacturers in Canada, met at Toronto, on June 13, and entered into an agreement to adopt the standard track wagon, as now endorsed by practically every wagon manufacturer in United States. The Canadian manufacturers, it is reported, will abolish all other measurements not later than January 1st, 1920. The changes in wagon construction, following the U. S. standards, will be of interest to Canadian leaders.

The most radical change is the adoption of a single width of track. The day of wide track and narrow track has passed. All farm wagons and farm trucks are now to be made of one track (auto-track width), viz., 56 ins., from center to center of the tires on ground. This is the standard automobile width.

All wagon beds are to be 38 inches in width and there are to be only two combinations of wheel heights, viz., 40-inch front and 44-inch rear, and 44-inch front and 48-inch rear. All tires on wood wheels are to be oval edge.

AUTOMOTIVE ASSOCIATION VISITS CANADIAN CITIES

A SCORE of members of the Automotive Equipment Association of the United States and Canada, made a three weeks' tour of Canada, during the latter part of July, and early part of August, commencing at Montreal, July 19, and ending up at Banff. Some of the cities visited included Montreal, Quebec, Three Rivers, Toronto, Hamilton, Detroit, Port Arthur, Winnipeg, Regina, Calgary, Banff and Lake Louise. The purpose of the trip was primarily to acquaint the members with Canadian automotive conditions and possibilities.

Members of the Automotive Equipment Association who are in the party, include: W. M. Webster, Commissioner, Chicago; J. Ernest Millen, John Millen & Son, Limited, Montreal; Ludger Gravel, Montreal; A. J. Hopkins and J. W. Paton, Canadian Fairbanks-Morse Co., Limited, Montreal; E. Dwight Smith and L. A. Johnston, Northern Electric Co., Montreal; F. B. Caswell, Sales Manager, Champion Spark Plug Co., Toledo, Ohio; A. J. Hayes, Sales Manager, Champion Spark Plug Co., of Canada, Limited, Windsor, Ont.; R. R. Englehart, Davenport, Iowa; F. T. Chase, Frank Mossberry Co., Attleboro, Mass.; G. L. Brunner, Utica, N. Y.; E. A. Pegau, Omaha, Neb.; Frank Campbell, St. Louis, Mo.; and H. M. Dine, The Dine De Wess Co., Canton, Ohio.

There is a Bethlehem plug for every type of motor.

Merit

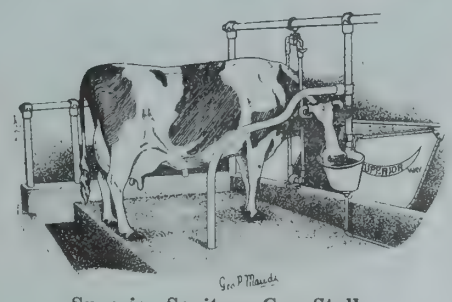
HERE is the highest priced tractor plug built. It is high priced because it is *better*—both in construction and material.

And in proof of this, such tractor manufacturers as the International Harvester Company and others are buying it exclusively at several times the cost of ordinary plugs because it is more than worth the difference. Its favor is solely due to merit.

The Silvex Company
BETHLEHEM PRODUCTS
E. H. SCHWAB, President
Bethlehem, Penna., U. S. A.

Bethlehem SPARK PLUGS

SUPERIOR EQUIPMENT

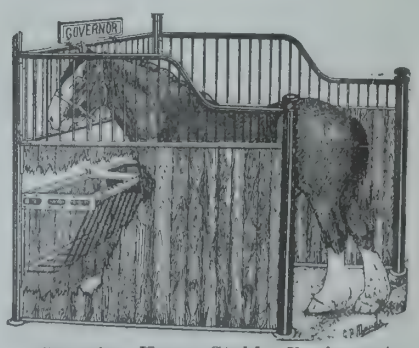


Superior Sanitary Cow Stall.

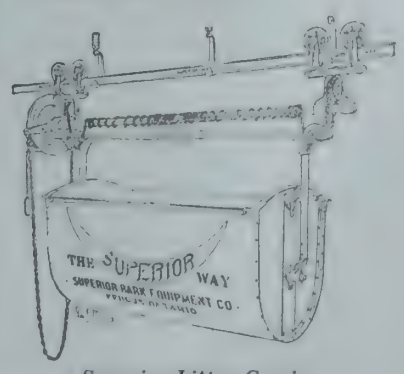
Renders profitable and satisfactory service to its proud **POSSESSOR** and a rich remuneration to the live **DEALER.**

We are **PIONEERS** and **SPECIALIZE** in the manufacture of modern steel stable equipment of **QUALITY.**

Superior Horse Stalls, Horse Box Stalls
Superior Horse Stable Equipment.
Superior Adjustable Cattle Stanchions.
Superior Standard Cattle Stanchions.
Superior Holland Cattle Ties.
Superior Steel Cattle Stalls—Bull Pens, Cow Pens, Calf Stanchions, Calf Pens, Hog Pens, Water Bowls and Stock Watering Outfits.
Superior Litter Carriers, Feed Carriers, Feed Trucks, Milk Can and Merchandise Carriers.



Superior Horse Stable Equipment.



Superior Litter Carrier.

SUPERIOR equipment is the **ACME** of modern stable construction.

We solicit correspondence from progressive dealers.

We have an **ATTRACTIVE PROPOSITION** to offer **LIVE DEALERS** in open territory.

WRITE for catalogue and particulars.

SUPERIOR BARN EQUIPMENT CO., FERGUS, ONT.

YOUR Repair Page: Carburetors and Mixers—Repair Charges and Mechanics' Wages—Safeguard Against Theft—An Overhauling Hint

THE troubles that assail a good many engines may be traced directly to mishandling, or adjustment made without a knowledge of the principles under which this piece of equipment operates. Therefore before anyone attempts to alter in any way a carburetor or mixer, he should first have a thorough grasp of the principles involved.

All any carburetor has to do is to supply a mixture containing the proper proportion of gasoline and air to the engine and this is done by allowing the engine to suck air past a jet which contains gasoline. The air rushes past this jet with the gasoline constantly maintained at a level very slightly below the top, and lifts a certain amount of liquid. Thus, owing to the rapid movement of the air, the gasoline becomes broken up into very small particles and mixes more or less thoroughly with the air.

Taking the above facts into consideration it can easily be seen that if the air is forced through a small passage just around the nozzle of the jet, it will increase its velocity, consequently lifting more gasoline; or if the jet is enlarged more gasoline will also be lifted, making a richer mixture. This rule applies in the other direction also, that is to say, if the space around the jet is increased less gasoline will be lifted and more air will be included in the mixture, making it weaker or leaner.

While there are hundreds of different kinds of mixers and carburetors, this is the basic principle on which they all operate and once it is thoroughly understood, no trouble should be experienced in adjusting any of them.

WE will take the simplest mixer of all and one that is used on most gasoline engines. This consists of a cup which is kept full of gasoline up to a certain level by a pump attached to the engine, any excess gasoline returning to the supply tank by means of an overflow pipe. From this cup a jet leads into the intake pipe and its top is just above the level of the gasoline in the cup to prevent it overflowing. The air is then drawn, by engine suction, past this jet, picking up a certain amount of gasoline on its way and is taken directly into the engine and fired.

On the size of the jet the quality of the mixture depends, so in most cases this jet is made adjustable by means of a needle valve with a taper point which when turned right down completely shuts off the gasoline supply. In actual practice it will be found that the engine can be started by opening this valve ONE FULL TURN. Then, when the engine is warmed up, turn it as far down, or in other words close it as much as possible, and still have the engine working steadily at low speed. Remember always, that the less gasoline you can use in the mixture the better the engine will run; it carbons up less, keeps cooler, and gives less trouble in every way.

It is seldom that an extra air valve will be found on this class of mixer, but this is sometimes the case. When adjusting, start in with the air valve making a firm seat, then after engine has started, adjust until it will nicely run on gasoline adjustment; after the best results have been obtained with the gasoline needle adjustment, relieve the tension on the extra air valve a little at a time, until it will take no more; if the engine spits through the intake pipe at high speed, either cut down the air, or give a little more gasoline.

THE main trouble experienced with this style is that *water and dirt accumulate in the cup,* which generally has only a loose-fitting lid; this eventually rises to the levels of the supply pipe leading to the jet and at the beginning causes missing, and finally stops the engine altogether. A spot of water will collect all the loose particles and cause rust, hence this cup should be drained occasionally or cleaned out. Another cause of trouble is a particle of the packing around the adjusting screw becoming loose, getting on top of the jet and choking the supply that way. Sometimes the gasket where the intake pipe bolts on to the engine becomes leaky and air is sucked through the flange instead of through the carburetor. This is a serious defect and must be watched for, as the writer has travelled hundreds of miles merely to put on new gaskets where the intake bolts on to the engine. Not only does this weaken the mixture at that point but it can be readily understood that it reduces the suction around the jet, making the mixture leaner there, too. This trouble can be detected by the fact that the engine will run all right at high speed, but will not run steadily at a low speed; it will also make the engine difficult to start and *impossible in some cases,* unless gasoline is injected directly into the cylinder.

We will now take the carburetor used on multi-cylinder engines and we find that most of them are much more complicated. In the first place they seldom have a pump to supply the gasoline; this is either fed by means of gravity, the supply tank being higher than the carburetor, by a vacuum system or by pressure. (We will not deal with the merits of these different systems at this time, but may do so later, sufficient for us to assume that gasoline is supplied to the carburetor.)

IN the gravity system it would of course be impossible for the fuel in excess of that required to run the engine, to return to the supply by means of an overflow pipe, for it would have to run up hill to do this. Therefore, another arrangement is used to shut the main supply pipe as soon as the gasoline in the cup has reached the predetermined level. This is done by means of a float right inside the cup; when this float rises to a certain point it closes a very fine needle valve in the supply line and when the gasoline falls in the cup through being used by the engine it allows the float to drop, and so open up the supply again. It can readily be recognized that the action of this needle valve must be PERFECT, for the movement and pressure is so slight that the slightest piece of foreign matter will cause it to stay open when it should be closed, and flooding follows. The remedy is obvious, but should the seat appear worn, do not attempt to make it a good fit by using a file or emery; the only way a good seat can be made is by grinding in with rotten stone powder or brass metal polish. A jeweler can make a good job of turning up this point if he is a skilled lathe man but he must take off as little metal as possible.

Should flooding still occur after this has been done and you have proved the seat tight by trying to blow through it with the float holding it closed, the fault will more than likely be in the float itself. There are two kinds in general use, those made of cork and those made of a hollow brass cylinder, closed at both ends.

The cork floats are coated with shellac when new and stay coated for a long time, but eventually become loggy, or soaked. This, of course, increases their weight; they float lower on the gasoline which, in turn, means that the gasoline has to rise higher to close off the needle valve. It naturally follows that the gasoline will not be below the top of the jet in the intake pipe and it will overflow by means of the jet all the time The cure is to take out of cork float, thoroughly dry it, and give it a good soaking in shellac and *allow to dry thoroughly before using again.*

WITH the hollow brass float a small leak will often develop where it is soldered; this allows the gasoline to get inside and so increases its weight, the same result follows as in the case of a loggy cork float, but the cure is entirely different.

If on taking the float out and shaking it gasoline can be heard shaking around you have located the trouble. Place the float under hot water; this will vaporize the gasoline and it will force the vapor out through the leak in the form of bubbles; mark this spot and keep it in very hot water until bubbles cease to come out and you cannot hear anything inside when the float is shaken, this indicating that all the gasoline has vaporized and come out. The next step is to solder up the hole. The minute the float is touched with a hot soldering iron it increases the air pressure inside and blows the solder out of the hole. To overcome this, hold the float in a dish of cold water, with only the spot to be soldered showing above, then touch it lightly with the soldering iron that has a spot of solder on it, and if you have tinned all around the hole previously, you will have a successful job.

Of course, should any of the small pivots, that the float actuates, become stiff from any cause whatever, flooding will follow as it will also from a bent needle valve used in the main shutoff.

If the trouble is in the other direction, and there is plenty of gasoline maintained at the proper level in the float chamber, but the engine will not run, or will run a short time and then stop and will run after a short rest and then stop again, look for the trouble in the filter or screen through which the fuel has to pass before reaching the float chamber. This seldom becomes completely choked all at once. It will give indications of its condition by erratic engine operation long before it shuts off the supply completely. This will often be found full of very small particles and slime, which must be brushed out thoroughly with a stiff brush soaked in gasoline, care being taken in replacing to see that the fibre washers are clean and make a good joint, for gasoline will seep through where nothing else will. If the washers are clean, and also the surfaces they go between, it will not take much pressure to make a gas-tight joint, but otherwise you are liable to strip the thread in the nut by pulling on it too hard in trying to stop a leak.

ON some tanks there is a sump which catches water before it can enter the fuel pipe to the carburetor. This should be drained at least once a week, for if the water is allowed to accumulate it will eventually rise in this sump until it is above the level of the feed line, thus getting to the carburetor and causing trouble.

It is a good habit, when gasoline is required for priming or cleaning purposes, to drain it from here and this will keep it clear and avoid the waste of draining it on to the floor.

This question of water in gasoline seems to be a vexed one with a good many operators and they blame everyone from the dealer from whom they purchase it to the refiner who makes it, but nine times out of ten the fault lies with themselves. If they have their own storage tanks, they are seldom in a waterproof building and the stopper is frequently not quite tight; then it is drained into any old pail and poured out into the tank without straining. ALL fuel should be thoroughly strained through chamois and all dust and flying straw kept away while this is being done. Even if all this is being done, it must be remembered that a tank will SWEAT on a hot day, and this moisture in the air, condensing inside the tank, will form quite a little water which runs down its sides and so causes trouble. This can be avoided by keeping fuel tank as nearly full as possible all the time. Should a spot of this get into the jet it is difficult to locate the trouble, for it will lie at the bottom while the engine is idling, but when she begins to pull, it lifts to the top of the jet and causes a temporary stoppage.

The adjustment of the jet on this style of carburetor is generally by a needle that goes up through the hollow jet and adjusts the nozzle from the inside. This means that the gasoline has a very narrow passage and is easily stopped, which emphasizes the need for straining. The head of the adjusting needle generally will be found under the carburetor and one full turn with the air valve seating firmly will enable most engines to be started.

SOME carburetors have an arrangement for heating, by hot water or hot air, the intake pipe. This is to assist in thoroughly vaporizing the mixture *before* it enters the engine and if this arrangement is made, it certainly should be "hooked" up to get the best results. In fact, any kind of apparatus like this will be much improved by a certain amount of heat, whether it be in the form of hot air supplied to the regular air intake, or by heating the pipes through which this must pass.

It will often be noticed when an engine is stopped that a small quantity of gasoline will run out of the bottom of the carburetor. This is what has been clinging to the sides of the intake pipe and held there by suction, but as soon as the suction ceases it falls back, runs out at the bottom, but soon stops. If the intake was heated this would not occur and proves that it is much more economical to use heat of some kind to assist carburetion.

There are far too many kinds of carburetors to attempt to describe any in particular, but the makers will always be only too pleased to give full directions for their operation and when you get these, FOLLOW THEM, for it stands to reason that the manufacturer should, and does, know the best way to operate his products. Your way may look better to you, but you may be "dead sure" that the manufacturer has forgotten more than you ever knew in his particular line and it is to his interest to give you what will prove to be the very best information.

In summing up, bear in mind that all points *must be perfectly air tight;*

The float must be in good shape and functioning properly;

The jet must be clear and adjuster as low as possible;

The screen and sump must be clear, and the gasoline must be strained.

See to these simple conditions and you will seldom be stopped on account of carburetor troubles.

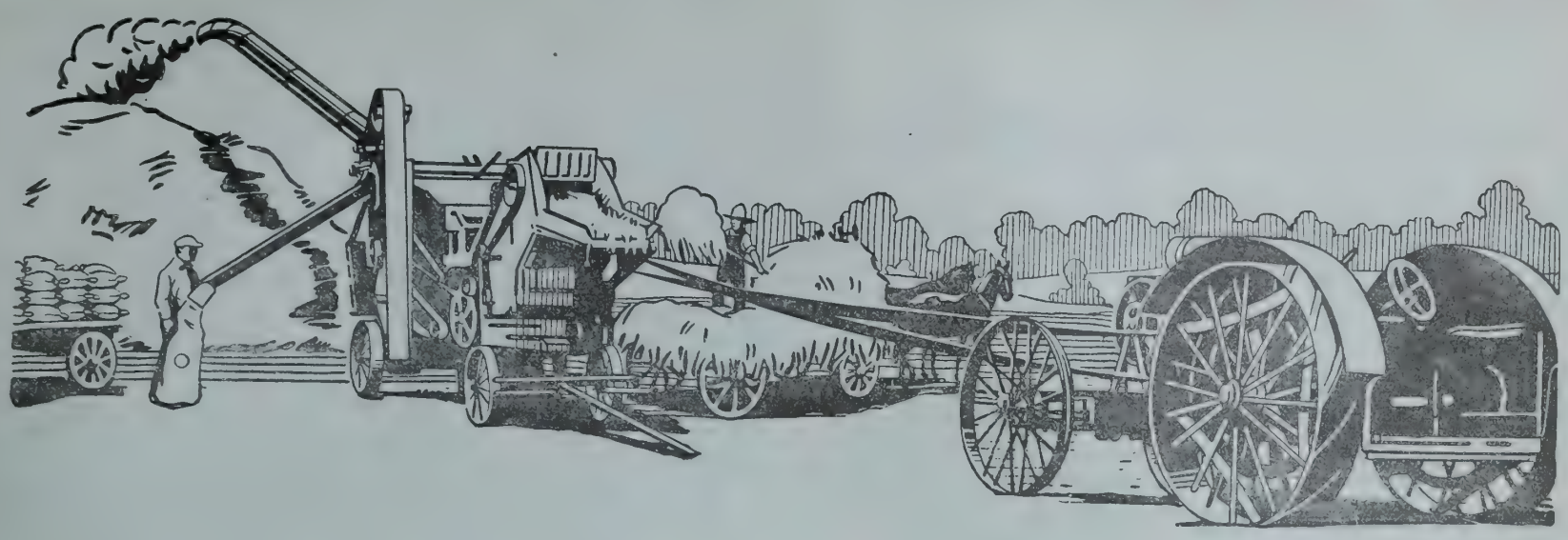
REPAIR CHARGES AND MECHANICS' WAGES

THE method of estimating jobs had never been entirely satisfactory, as it had always been more or less guesswork. The estimates had to be "loaded" to a considerable extent in order to protect against loss on account of trouble that did not show during the preliminary inspection. Definite prices had been fixed for certain operations, but these figures were based on general experience rather than actual records. In a great many cases they were unjust, either to the customer or to the shop.

In order to overcome this the superintendent of our shop started a system of time studies covering the amount of time used in making every sort of repair. Various men in the shop were timed on certain operations and an average taken, from which the price of the repair was made. It took a great deal of time to complete these, but finally the supe felt that all possible operations on all makes of cars were timed. Then he and the owner got together to make up their price lists. These were made in pamphlet form and the subjects arranged alphabetically.

The testers and shop foremen received copies and were supposed to be guided by them in making estimates and prices on jobs. In order to test out the system, the testers made estimates in all cases, whether the customers wanted them or not. These were carefully

Continued on page 54



A Grain Saver You Can Sell!

The farmer who has seen his grain sprout and spoil in a wet season, or dry out and shell away in a dry one, before he could get it threshed, has gone through one of the most unpleasant experiences in his business.

He'll never want to take that chance again. It is easy to sell him

THE HUBER JUNIOR THRESHER

With it he can always thresh his grain when it is *just right*. He can do the work with his own men.

The saving in threshing bills will soon pay for the Huber Junior. It may pay for itself the first season by saving the crop—or a good percentage of it—from loss.

A farmer can do his own threshing and that of his neighbors as well if he wants to.

The Huber Junior Thresher is a thoroughly practical threshing machine—just as efficient as the large Huber Threshers which are known everywhere as "the machine that *saves the grain*."

The Huber Junior Thresher can be used with any 10-20 tractor, and the Huber Light Four 12-24 Tractor furnishes ample power for the machine fully equipped.

The Huber Junior Thresher and the Huber Light Four Tractor both are excellent sellers in up-to-date farming communities.
Some good territory is still open. Write for the facts.

Barkley Tractor & Separator Co.
EDMONTON, ALTA.

The Huber Mfg. Co.
BRANDON, MAN.

The Huber Junior Thresher and the Huber Light Four are made by The Huber Manufacturing Company, Marion, Ohio, U. S. A.

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

IS

A CANADIAN COMPANY offering service of interest to and in the interest of Canadians.

Time payments made possible and profitable for Manufacturer, Dealer and Customer. Of particular interest to Automobile and Musical Instrument Trades.

LET US KNOW YOUR REQUIREMENTS

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

Bank of Hamilton Building, Toronto, Ontario
McArthur Building, Winnipeg, Man.

WE GIVE

"Quality and Service"

IN

TRACTOR and TRUCK STEEL CASTINGS

JOLIETTE STEEL CO., LIMITED

903 Read Building, Montreal
JOLIETTE, P.Q.

Shaw's Auto Salvage Parts Supply Co.

923-927 Dufferin Street, Toronto
PHONE JUNCTION 3384

An efficient service intelligently rendered on all used parts.

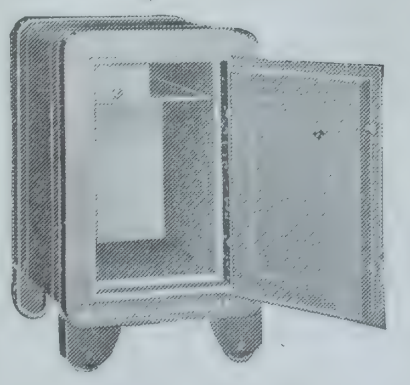
GEARS, MAGNETOS, RADIATORS, SHAFTS, SPRINGS, CARBURETORS, BEARINGS, LAMPS, WHEELS

"ALL SERVICEABLE" NO JUNK

Correspondence Solicited. Inspection Invited
Prompt Deliveries. Money Back Guarantee. No advance in Our Prices.
Largest Stock in the Dominion. No sending of Wrong Parts is convincing enough for you to *Wire, Write or Phone*

Shaw's Auto Salvage Parts Supply Co.

923-927 Dufferin Street, Toronto
PHONE JUNCTION 3384 K-13



Security for your Victory Bonds, Sales Notes, etc.

Safety First!

Don't leave valuable papers and documents lying about the house, where they can be stolen, burned or mislaid.

Put them in a real Made-in-Canada, fire-resisting steel cabinet, with combination lock. No needless searching for what you want. Everything right to hand.

This is a splendid opportunity for implement dealers. Write for prices and full particulars at once.

J. & J. Taylor, Limited
TORONTO SAFE WORKS
Toronto, Canada

A.S.A.E. Drafts Tractor Demonstration Rules for Agricultural Institutions and Manufacturers' Demonstrations

THROUGH its tractor testing and rating committee the American Society of Agricultural Engineers has issued a set of rules and instructions for conducting tractor demonstrations as conducted by agricultural institutions and manufacturers' demonstrations. They are known as Class "B" Rules, and are designed to meet the needs particularly of agricultural institutions and manufacturers for conducting tractor demonstrations of state-wide or national character.

The object of the "Class B" Rules, as stated by the committee, is to make all tractor demonstrations of this kind comparable and of the greatest educational value. There is a great demand by persons conducting demonstrations for standard rules and instructions to follow. In the past there has been such a lack of uniformity in conducting demonstrations and securing data that the results of these events have proved of little value, either from a practical or educational standpoint.

CLASS "B"

Rules for Maximum Brake Test

Rules 1 and 2, governing plowing tests of Class B, apply also to this test.

Rule 3, Time. Each entrant will be given two hours, if necessary, in which to make adjustments and trials before starting to brake test. Duration of brake test will be two hours continuous running.

Rule 4, Fuel. The same fuel used in plowing test must be used in this.

Rule 5, Speed. The belt pulley should be run within 10 per cent. of its rated speed.

Rule 6, Equipment. (a) Pony brakes will be used which will all be of the same design, and will be calibrated before the tests. These brakes will be of approved design, water cooled, equipped with a continuous revolution counter and well mounted. (b) The belts furnished will be 5 and 6-inch rubber belts, 80 ft. long and 7 and 8-inch rubber belts in 100 foot lengths, and will be furnished by the committee.

Rule 7, Altitude and Temperature. All results will be reduced to a basis of 14.7 lbs. barometric pressure. All results will be also corrected to atmospheric temperature of 70 degrees F.

Rule 8, Rating. The rating recommended for the tractor will be based upon the results of this test. 90 per cent. of the horse power developed throughout the test will be the recommended A.S.A.E. rating.

Rule 9, Re-Entry. If an entrant is disqualified for any reason, he may apply for another trial. Such request must be made immediately.

Note: Any necessary interpretation of all rules will be made by the committee of the test.

Place of test .....Date.....
Name and model of tractor .....
..... Serial No. .....
Gasoline ....
Fuel
Kerosene ....
Sp. gr. of fuel gas ..... Kerosene....
R.P.M. of belt pulley .....
Pulley diameter .....
Pulley face .....
Brake horse power sustained .....
A.S.A.E. recommend belt rating (90 per cent. of 2 hr. max.) .....
.... Chairman
Test Committee ..... Brake
..... Data

Data Sheet for Tractor Tests, Class B

Place of test ..... Date ....
Tractor data .. ..
Name and model of Tractor .....
Serial No.....
Stubble .....
Make of plow .... No. of bottoms ....
Size .... Type Ben. Purpose ....
Sod.
Field Data Wet...
Kind of soil ... Condition ... Moist...
Character of land .. .Level .. .Dry ..
Previous crop grown .. ..Rolling ....

Plowing Data

Length of field (headland to headland) ..... ft. .....
Width edge to edge of furrow, less width of land plowed before test) ..... ft.

Note: All lands for economy tests to be within 10 per cent. of the same length. (See instructions).
Average depth of plowing ..... Total area plowed ..... acres
Total time of plowing ...hrs. ... min.
Time out ..... min.
Duration of test ..... hrs. ..... min.
Rate of travel (ft. per min.) .. ..
Gal. of kerosene used .. ..
Gal. gasoline used .. ..
Sp. gr. of fuel gas ...Kerosene .. ..
Water used (radiator) ...Engine ....
Fuel used per acre gasoline .. ....gal.
Cost of fuel per gal .....
Kerosene ..gal. Cost of fuel per gal. ..
Average draw bar pull .. . .lbs.
Average draw bar h.p. .. ..
Draw bar horse-power to be based upon rate of travel during fuel test.
Fuel used per draw bar horse-power hours .. .. .gals.

CLASS B

Rules for Plowing Tests

Rule 1.—Assignments. The company's representative should report for assignment to the committee in charge of tests upon the arrival at the ground. (Note instruction 3-b.)

Manufacturers must have tractors ready at the time assigned them or forfeit the privilege to that test.

Rule 2.—Entries. (a) Only one tractor of each model of the same make may be entered. (b) All tractors entered for tests to be stock machines as regularly sold.

(c) Each tractor should carry a prominent placard 20 in. in height and 30 in. in width. If other size is used, dimensions should be of similar proportions.

Rule 3.—Duration and time of test. uration of all economy plowing tests will be four hours. The time for the tests will be set by the committee and company representative when assignments are made.

Rule 4.—Position on fields. The en- will draw for his position on the field. The plots will be numbered and the number drawn entitles the entrant to the plot bearing that number.

Rule 5.—The field. All lands will be of uniform length, and the width will be determined and marked before the test.

The entrant will not be required to finish his land as a part of the test. Special care will be used in selecting the fields for tests that all conditions will be as nearly uniform as possible.

Rule 6.—Draft test. Two preliminary rounds will be made to adjust the outfit. In the third round the average draft will be recorded with a dynamometer, after which the test will start. Following the four-hour run, another dynamometer test will be made and the average of the two will be taken as the draft during the economy test.

The draft as was shown by the dynamometer will be reduced to the actual resistance in the direction of the line of travel. The angles of the dynamometer unit will be determined with a suitable geniometer.

The draw bar horse-power will be based upon the draft as obtained above, and the average rate of travel taken during the plowing period.

A dynamometer record should be secured for the complete round.

Rule 7.—Fuel. The test should be made only on one fuel. This will eliminate the necessity of including more than one fuel in the final results. The fuel level in the tanks will be measured just before starting the test, and at the end of the test the fuel used will be determined. (See instructions.) The fuels commonly used in the particular local-

ity in which the test is held will be supplied the entrants from one source. The lowest type of fuel available for which the tractor is recommended by the manufacturer should be used in the test.

Rule 8.—Water. The water used in the radiators will be measured by the same method as used in measuring the fuel. If water is used in air washer or with fuel, it will be kept separate from the water used in the cooling system.

Rule 9.—Travel. The rate of travel should be within 10% of the speed at which the tractor is entered. This speed is to be maintained throughout the test.

Rule 10.—Plows. The same plows with the same hitch and adjustments are to be used throughout the test, and no one will be allowed to handle or adjust the plow other than the operator of the outfit.

Rule 11.—Depth. The depth is to be checked every 10 rods by the A.S.A.E. (Heylman) depth gauge.

Rule 12—Width. The width cut by the plows should be checked at least every other time the depth is taken, and the operator should be made to maintain a uniform width of cut.

Rule 13.—Delays. If it is found necessary to stop the tractor due to tractor trouble more than thirty minutes in the aggregate, the test is annulled.

Rule 14.—Re-entry. If an entrant is disqualified for any reason, he may apply for another trial. Such request must be made immediately.

Rule 15.—Data. All data will be the property of the individual manufacturers and of the test committee of the A.S.A.E. and it will be made public, unless the manufacturers desire to withdraw the results and then no part of such data may be issued later. No partial data from any one test may be used as A.S.A.E. data unless the entire results of that particular test are published.

Note.—Any breach of rules disqualifies the entrant. Interpretation of all rules and questions not covered by the rules shall be made by the committee in charge of test. (See instructions which cover and for part of these rules.)

CLASS B

Instructions for Conducting Tractor Plowing Tests

1. (b) Each company should place one man in charge of its interests in the tests who will consult with the test committee for assignments not later than one day before the time of the first test. The time for the tests and position in the field will then be assigned. Entrant must have his machine in the field ready to start the test at the time allotted, or forfeit the privilege to that particular test.

2.-b (a) Only one tractor of each model of the same make may be entered for the same test. (b) All tractors entered for the tests must be stock machines as regularly furnished the trade. No special attachments of accessories will be used that are not regularly furnished with the machine. (c) Each tractor should carry a placard giving the following information:

Name . . . . . Rating . . . . . .
No. of cylinders . . Bore . . . . Stroke . .
Normal engine r.p.m. . . . . .
Travel . . . . . M.P.H.
Travel . . . . . M.P.H.
Travel . . . . . M.P.H.
Fuel . . . . . .

The rate of travel at which the tractor is entered in the demonstration should be given in bold figures in the upper space; the other speeds, if tractor has more than one speed, in small figures in the lower space.

3.-b To get any reliable and comparable data, it is necessary to have the tests of the same length. Experience has demonstrated that short tests are seldom satisfactory, and results have little meaning to the practical man, hence tests of four hours are recommended. The time for the tests will be arranged by the company representative and the committee at the time of assignment.

4.-b. The entrant will draw for his position in the field at the time assignment is made. The plots will be numbered and the number drawn entitles him to the plot bearing that number. Special care will be used in selecting the fields for tests so that all conditions will be as nearly uniform as possible.

5.-b The land will be laid out with head-lands of sufficient width for turning, and all lands will be within 10% of the same length. This is done in order to place all tractors as nearly as possible on the same basis.

Stakes will be set up at both ends to indicate the starting line, and the entrant may place as many intermediate stakes as he desires. He will be required to make a straight furrow in starting out, and should maintain an even width throughout the test.

6.-b Two preliminary rounds will be made to adjust the outfit. The dynamometer will be used the third round and the average draft will be recorded. Following the outfit on the third round, the observer will place, at intervals of ten rods, small stakes to mark the inner edge of the furrow bottom.

A link of equal length to the dynamometer unit will be placed between the plow hitch and tractor draw bar so the plow adjustment will not be disturbed when the dynamometer is used.

At the end of the third round, the dynamometer will be disconnected, the fuel measured and the test started. The final width will be obtained by measuring the width plowed, from outside to outside edge of furrow, measured every ten rods as indicated by mark stakes and then deducting the width between the mark stakes, which is not included in the test. The rate of travel during the dynamometer test should be the same as during the plowing period.

7.-b Before the test commences the fuel tanks will be filled to the top with tractor set level. The run will be made on one fuel only to eliminate the necessity of including two fuels in the final result. If kerosene is to be used, the motor may be warmed up on gasoline and the fuels switched just before starting the test. The fuel will be supplied the entrant from a common source in the field.

8.-b The water will be measured by the same method as used in measuring fuel. The water used in the cooling system will be kept separate from that used with the fuel and air washer.

9.-b The rate of travel will be adjusted in the preliminary rounds so as to come with 10% of the rated speed.

The same rate of travel should be maintained throughout the test and the observer will keep an accurate check on this by timing every second round, excluding the time required in turning at all stops and at the ends. However, the time consumed for turning at ends will be included in the plowing time.

10.-b The plow will be adjusted in the two preliminary rounds and no change of adjustment will be permitted during the test and including the first preceding and following rounds when the dynamometer tests are made.

11.-b The depth will be checked every ten rounds in order to obtain accurate average of the depth plowed. These distances will be indicated by mark stakes.

The plow will be set for the upper depth before the test is started and that depth maintained throughout the test.

12.-b The width cut by the inside plow will be checked by the observer at least every second time depth is taken, and the operator will be required to maintain an even cut.

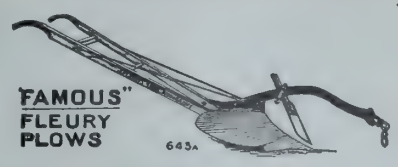
13.-b If in the aggregate it is found necessary to stop the tractor more than thirty minutes, the test is annulled.

14.-b This rule, at the discretion of the committee, provides an opportunity to re-enter an outfit that has been disqualified.

15.-b Much of the data will be available and turned over to the company representative promptly at the completion of each test, but the committee reserves the privilege of checking it and will submit the complete results in standard forms before 10 p.m., for all tests conducted during the day.

All data will be made public unless a manufacturer, for any reason, desires to withdraw the results of some machine, and then no part of such data may be issued later.

FAMOUS FLEURY PLOWS



A HIGH STANDARD MADE HIGHER STILL

Deep and abounding satisfaction surrounds the sale and the use of practically every Plow that leaves the Fleury factory.

Even if we felt disposed to do so, we could not lower the quality of Fleury Plows. In this respect we are not free agents, because public opinion has established a standard for everything bearing the name "FLEURY." We dare not fall below the high estimate that has been formed of us as Plow Manufacturers.

Every dealer in Fleury Plows knows that his customers come to him with the highest possible expectations. He knows that each Fleury Plow he sells forms another link in the bond of confidence: for almost invariably the Plow not merely satisfies his customer, but greatly pleases him. He gets more than value for his money.

Naturally, knowing what is expected of us, we feel a deep sense of responsibility. We realize that quality and performance are all-important. And so, a naturally high standard becomes higher still because of the complete confidence bestowed upon us by the public.

Our Dealers, too, are inspired to make greater efforts each season; and each season their business grows accordingly. In order to satisfy the constantly increasing demand, thousands more of the famous Fleury Plows are made each year.

THEY LEAD EVERYWHERE

J. FLEURY'S SONS, AURORA, ONTARIO

Hindview
AUTO MIRRORS

The "Hindview" Auto Mirror prevents accidents by enabling the driver to keep an eye on the rear traffic without losing sight of the road ahead. Our Ball Joint allows immediate adjustment to any desired angle without the use of any tool.

Substantially made — nicely finished — has five inch plain, or lens, plate glass mirror. The lens mirror increases the field of vision about 50 per cent. without distorting the view. Note large, firm clamp for attaching to windshield.

Write for our folder showing complete line

Agents, Jobbers, Write for our Proposition

Superior Quality KALES STAMPINGS *Prompt Deliveries*

PRESSED METAL PARTS, LIGHT AND MEDIUM WEIGHT STAMPINGS

Our complete plant, superior equipment and efficient organization are at your service. You will insure satisfactory results by letting us make your stampings. Motor, axle, transmission and clutch stampings. Write to-day enclosing blue prints or samples for estimates and our catalog.

KALES STAMPING COMPANY
446 West Lafayette Blvd. Detroit, Michigan

YOUR Repair Page

Continued from page 50

checked against the foremen's prices on completed jobs. It did not take long to get the discrepancies ironed out, and as soon as this was done the estimates and job prices came very close together.

All Jobs Included

The time studies covered every possible piece of work, even to putting in gasoline and oil or running the cars on the elevator. While these little "time wasters" were not actually charged, they were taken care of in other associated operations. The owner never let up on this. He was constantly urging the supe to find more places where leakage occurred, and devise means of stopping the leaks. These stunts were more or less irritating to the mechanics, who had been accustomed to a loose, hit-or-miss system such as is practised in most shops. It was hard to make a man understand why, when he wanted three bolts of a certain size he should not take six and drop three of them into his tool box for future use. Also why when he wanted six cotter pins he should not take a handful; but steady driving at it finally brought them to tolerate the system, if not to like it.

After the time studies were complete, the piece-work system was slowly put into effect. It was done carefully and closely watched all the way. The simplest and most standard work was first put on a piece work basis and gradually added to until practically all the operations were both paid for in the shop and charged to the customer on a work, instead of a time, basis.

There is nothing like piece work to speed up production. Pay a man a certain price for a certain operation, and his earning power is limited only by his ability and industry. It also gives him an incentive to think, as he is constantly on the lookout for some method of cutting time on the work.

It Pays, on the Whole

Quite often in time work an injustice is done when two men are paid at the same rate and one does a good deal more work than the other. Of course, it calls for careful supervision and inspection, but on the whole it pays, and pays well. It cannot very well be done successfully in a very small shop or one where the work is not steady. But as soon as it gets steady enough to be in the production class, piece work pays both employer and employee.

Methods somewhat similar in practice were put in operation in parts department. A great deal of time had been lost in finding out just what part a customer wanted. He often failed to bring the old part with him, and it was difficult for him to pick out the piece from the parts books. The parts men would waste time bringing pieces from the bins.

The superintendent had charts made which hung in the room outside the parts windows. These charts showed actual size pictures of all parts and were arranged in groups such as motor, transmission, rear axle, etc. These were of the greatest help in saving time for customers and parts department employees.

SAFEGUARD AGAINST THEFT

There seems to be a great tendency toward the cultivation of the art of "car stealing" at the present time, and motorists cannot be too careful in parking their cars in public places. Switch locks are fitted to practically all makes of cars and these should be used. A good plan, however, is to make one additional safeguard by removing the distributor arm from the ignition timer or distributor. This is a small part and can easily be carried in the vest pocket, besides being easily removed and replaced, and as it can be replaced in one way only, the ignition timing cannot be altered through taking this precaution. Without the distributor arm the engine cannot be started up, and he would indeed be a "professional crook" who carries a set of distributor arms for the various ignition systems to aid him in car thefts.

AN OVERHAULING HINT

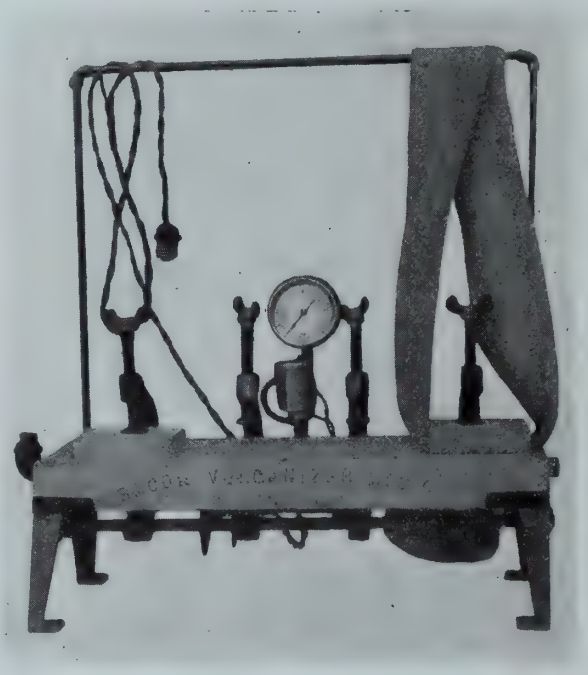
When reassembling the automobile engine after overhauling, care should be taken to replace the various valves, valve springs, spring washers, tappets, etc., in the cylinders from which they were taken. The best way is to number each set by means of steel figure punches and then there can be no mistake in reassembling.

REPAIRING GEAR BOX

One who makes repairs on the gear box of an automobile should be sure to keep the opening covered in order to prevent anything from falling into the box. An automobile owner of my acquaintance had to pay for two gears, for the installing as well, because a careless workman allowed a loose nut to fall into the gear box and remain there, the nut finally working into the gears when the car was on the road. When repairs have been made on the gear case, therefore, a thorough examination of the box should be made before filling with grease.

CORD TIRE VULCANIZER

The Bacon Vulcanizer Mfg. Co., Oakland, Cal., is now manufacturing new sectional vulcanizing moulds which are especially sized and built to accommodate and properly cure cord tires. Considerable difficulty has been found in some types of sectional moulds in curing cord tires, due to the fact that they are 5 per cent. over size, and necessarily require different spacing and sizing of the cavity. All cavities and bead moulds in this type are closely machined. Another feature of these moulds is that all steam cavities are tied and cross-tied like a locomotive boiler, which gives the maximum amount of safety.



REPAIR THRESHERS

An enormous waste of grain and great loss of time result every year through the inefficient work of threshing machines that are not properly repaired and put in thorough working condition before the beginning of the working season.

Defective parts are overlooked or neglected in the hope that they will last through the season, when they should be replaced. When they fail in the midst of the season, serious losses often result before repairs can be made.

During or just before the threshing season, new parts are difficult to get promptly because of the usual rush of orders from the many who have procrastinated.

CAR PRICES SINCE 1910

The average price of cars sold in Canada to-day is within $12 of the average nine years ago. The figures tabulated do not take into account the quantity production, but are based solely on the average model price. In 1914 the average, on this basis, hit high water mark —$2,635. Two years later more than $1,000 had been lopped off, the average dropping to an even $1,600. Here are the figures:

Year	Price
1910	$2,214
1911	2,560
1912	2,508
1913	2,585
1914	2,635
1915	2,005
1916	1,600
1917	1,687
1918	1,822
**1919 ..... **	**2,226**

RETREAD BANDS WOULDN'T STICK

A repair man writes that he has been having trouble with getting retread bands to adhere properly to old carcasses that are brought in to him for retreads. As he explained it, he found on cutting into some of his retreaded jobs that were brought back that the stock underneath the tread band had bunched up in places and seemed undercured.

There are several things that might have caused this trouble, the principal one of which might have been underpressure due to lack of tension on the cross-wraps. Too small a coil in the tire will cause the trouble—this latter condition is common when retread bands are applied to cord tires.

Check up on steam pressure constantly in both the pot heater or kettle and the sectional moulds. A variable steam pressure will cause a lot of trouble. This is particularly true with the kettle. Retread bands are semi-cured so they will hold their shape while being applied and improper steam pressure may make the retread appear correctly cured and yet hide the defective cure underneath.

REMOVING TIGHT VALVE STEM CORES

A suggestion from one dealer relates to the difficulty sometimes encountered in the replacing of valve insides or cores. It is frequently the case that when a valve core is to be removed from a tube that has been in service for some time it sticks to such an extent that it cannot be removed with the threaded portion. An easy method for removing these tight valve cores is to heat the stem with a blow torch allowing the flame to be blown directly into the valve stem for two or three seconds. After this treatment the core will come out easily with a small pair of pliers.

NEAT REPAIRS ON TIRES

A dealer has written about a plan he followed in making a repair on practically a new casing without marring the natural beauty of the tire. He sends in the suggestion for what it may be worth to other dealers, for he believes that the majority of the repairmen throughout the country are anxious to turn out neat and attractive repairs.

The tire this repairman received had been worn through from rubbing against the rack that held it to the back of the car. The tire was practically new and the owner was anxious that the hole be repaired so that it would not show. The repairman, instead of cutting down his section as he would on the ordinary repair job, cut through the tread on a zig-zag line drawn at the base of the blocks across the tire. His tread union, therefore, came at the base of the blocks instead of across the face of the blocks.

From this his operations were identical to the regular tearing down and building up. He laid his tread back, rebuilt the section affected, laid his old tread down again after it had been carefully plugged and a new block shaped where the old block had been worn through. The tire was then placed in a sectional vulcanizer, the blocks protected by a negative pad, and cured.

This method of turning out neat repairs on All-Weather tread tires has been tried out in our own tire repair school and found to be very practical.

JONESEY'S FORD

Jones owns a nice Ford car,
To ride in it was heaven;
He ran across a piece of glass
Bill, $14.97.

He took some friend out for a ride,
Seemed good to be alive;
The darned old carburetor broke,
Bill, $20.65.

He started out the boulevard
To speed he thought was fun;
He stopped too quick and stripped his gears,
Bill, $90.61.

He cranked the car one early morn,
He had never felt so fine;
The handle smacked him on the wrist
Bill, $229.

He took his wife down town to shop—
To save car fare was great;
Hit a post and tore the engine out,
Bill, $398.

He spent all of the coin he had,
And then in anguish cried;
I'll put a mortgage on the house
And take just one more ride.

—*Framonthly.*

YE ANCIENTTE RUELLS

SOME joker is at work and some of his work reached the commissioner of motor vehicles, says *Motor Age*. The work is under the guise of the Farmers' Anti-Automobile Protective Association, and the wag sends the following:

The Farmers' Anti-Automobile Association has just held its convention and adopted the following code of ethics:

1. On discovering an approaching team the automobilist must stop offside and cover the machine with a tarpaulin painted to correspond with the scenery;
2. The speed limits on country roads this year will be secret and the penalty will be $10 for every mile offender is caught going in excess of it;
3. In case an automobile makes a team run away, the penalty will be $50 for the first mile, $100 for the second mile, $200 for the third mile, etc., that the team runs away in addition to the usual damages;
4. In approaching a corner where he cannot command a view of the road ahead the automobilist must stop not less than 100 feet from the turn, toot his horn, ring a bell, fire a revolver, halloo and send up three bombs at intervals of five minutes;
5. Automobiles must be seasonably painted, that is, so they will merge with pastoral ensemble and not be startling. They must be green in spring, golden in summer, red in autumn and white in winter;
6. Automobiles running on the country roads must send up red rockets at night at every mile and then wait ten minutes for the road to clear. They must then proceed carefully, blowing their horns and shooting off roman candles;
7. All members of the society will give up Sunday to chasing automobiles, shooting and shouting at them, making arrests and otherwise discouraging them from touring on that day;
8. In case a horse will not pass an automobile, notwithstanding the scenic tarpaulin, the automobilist will take the machine apart as rapidly as possible and conceal the parts in the grass.

MADE IN CANADA

BUFFALO OILS

Quality Oils for Every Farm Purpose

You cannot get the best results in your machinery operations unless you use **quality** oils and greases. The quality of BUFFALO OILS has been thoroughly proven —they are Western Canada's favorite brand.

There's a Buffalo Oil or Grease to meet every requirement of the farm. Put them to the test.

BUFFALO OILS INCLUDE

Automobile Oil	Gasoline Burning Oils
Tractor Oil	Transmission Greases
Gas Engine Oil	Cup Grease
Steam Cylinder Oil	Crank Pin Grease
Machine Oil	Graphite Grease

PRAIRIE CITY OIL CO., LIMITED

Winnipeg Manitoba

Farmers with Silos Need Silo Fillers

Do farmers in your district grow corn? If they do, and have silos, you have a good chance of selling silo fillers. There has been a great increase in the number of silos throughout the country in the last few years, and in the amount of cut feed used by farmers. This growth has meant a greatly increased demand for silo fillers and the business continues to grow.

Peter Hamilton
Feed Cutters and Silo Fillers

are right up-to-date in every respect and embody the latest improvements for lessening the danger and inconvenience met with in many machines of this class.

Our No. 7 Tornado Ensilage Cutter and Blower (illustrated) will handle 8 to 10 tons of corn per hour easily. Frame is of selected Canadian hard maple, mortised and tenoned, always tight and right. These and other features of the fans, knives and roller, make the Peter Hamilton silo filler a general favorite.

Why not handle this reliable line of machinery for which there is a brisk demand. The majority of farmers already know about Peter Hamilton silo fillers and other implements. Let them know that you handle this line. Write us for particulars.

The Peter Hamilton Co., Limited

Peterborough Ontario

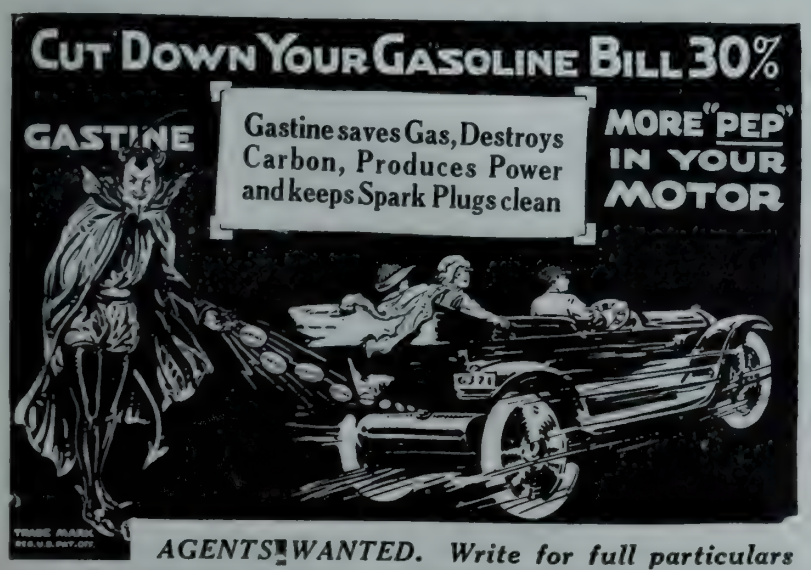
GASTINE GASTINE GASTINE

Is a Gasoline Economizer

IN TABLET FORM---EASY TO USE---ONE TABLET TO THE GALLON IN YOUR GASOLINE TANK

Produces 30% more Power and Climbing Ability---Faster Ignition---A Smoother Running Engine---More Mileage and No Carbon

Equally Effective in use with Automobiles, Tractors, Motor Cycles, Motor Boats and Stationary Engines.


CUT DOWN YOUR GASOLINE BILL 30%
GASTINE
Gastine saves Gas, Destroys Carbon, Produces Power and keeps Spark Plugs clean
MORE "PEP" IN YOUR MOTOR

AGENTS WANTED. Write for full particulars

Has just been placed on the Canadian Market. Demand assures quick turnover.

Gastine is guaranteed harmless---(Tested by Milton Hersey & Co., Limited, Analytical Chemists.) Endorsed and its use recommended by the National Ford Owners Club, Inc. Certificate 878.

Retails at $1.25 per box containing 100 tablets. Liberal discounts to dealers.

Gastine is the only product of its kind which has successfully lived up to every claim made for it by the manufacturers.

ROBERTSON & MURPHY LIMITED

Coristine Bldg., Montreal, Canada

Every Ford Car Owner Is a Purchaser of

Champion

Dependable Spark Plugs

Champion "X" for Ford Cars, A-15, 1/2 inch.

Price, 90c

Think what the replacement business of Ford owners in itself means to you—over 140,000 of them in Canada.

You can capture your share of this business if you carry Champion "X" spark plugs. Champion "X" is exclusive equipment on every Ford car that leaves the factory. It's the plug that is absolutely guaranteed by us and recommended by the Ford Company, whose instruction book says:

> **"There is nothing to be gained by experimenting with different makes of plugs. The make of plugs with which Ford engines are equipped when they leave the factory are best adapted to the requirements of our motor."**

Champions are equipped with our 3,450 insulator and patented asbestos lined gasket construction which enable them to take the hardest kind of punishment unflinchingly.

There is a Champion for every type of motor car, truck, tractor, farm engine, motor boat and motorcycle and each is backed by our guarantee: "Absolute satisfaction to the user or full repair or replacement will be made."

Order from your jobber now and get the full benefit of our big business-building, advertising effort and the reputation behind Champions.

Champion Spark Plug Co. of Canada, Limited
Windsor - Ontario

JOHN DEERE

WELLAND, CANADA.

THE TRADE MARK OF QUALITY
MADE FAMOUS BY GOOD IMPLEMENTS

A Famous Trade-Mark That Wields a Powerful Influence

SENTIMENT and strict business sense combine to make the famous John Deere trade-mark a constant and powerful incentive to maintenance and improvement of quality in the production of John Deere farm implements.

IN sentiment the trade-mark is as a proud family name that must be kept free from debasement. It is an emblem of excellence in the years gone by—an heritage from a glorious past that must be passed on, its significance ever growing, to a still more glorious future.

IN a strict business sense, the trade-mark is a badge of quality that attracts purchasers and that must be rigidly upheld in order to keep the confidence of the buying public.

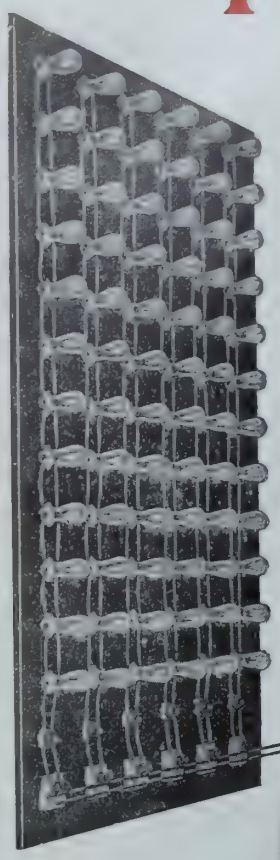
TO debase a single article bearing the John Deere trade-mark would be to weaken the confidence of the buying public in the entire line of John Deere tools. It would be commercial suicide.

WE are justly proud of the great institution that has grown up back of the John Deere trade-mark. Our aim is to promote this greatness of the House of Deere. We know that the accomplishment of our aim depends entirely upon the continued significance to the public of the familiar emblem that is stamped on all John Deere tools.

We Cordially Invite Our Dealers ta Make Our Tent Their Headquarters While at the Exhibition

JOHN DEERE MFG. CO., LIMITED, WELLAND, ONT.

Your Logical Time---What Territory Do You Want?



ANYTHING the Canadian farmer wants and needs—he buys.

He wanted automobiles—he needed them.

He bought them—by the thousand—one farmer in every six!

The automobile taught him a new scale of living.

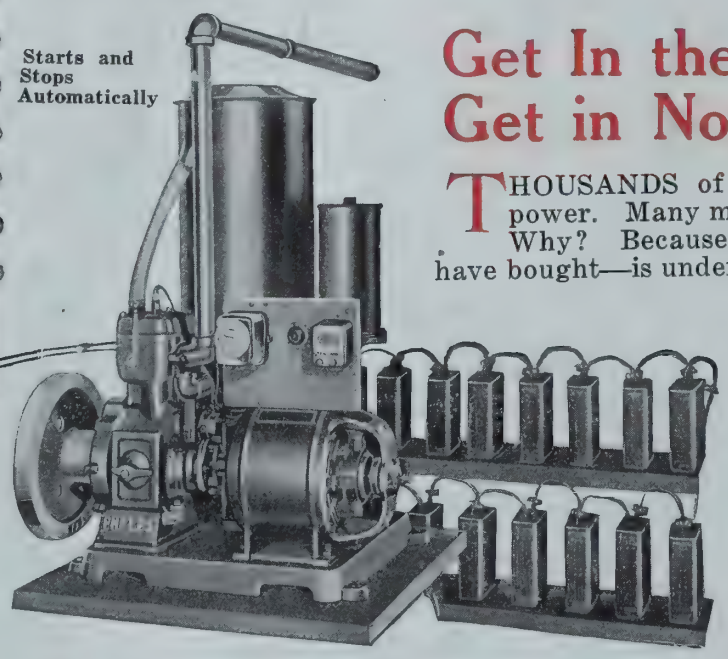
Now he is ready—willing—waiting to buy Farm Lighting and Power Plants—also by the thousands.

You can't pick up a farm paper for a number of years back without seeing a farm lighting plant advertisement.

He's **educated** to the comfort, convenience and money-making possibilities of electricity on the farm. He's going to adopt this new scale of living.

He's made the money—is still making the money—to pay for the investment.

The men who get in on the ground floor are the men who make the big money. That was true of the automobile business. It's true of every specialty business! It's true of the farm lighting plant business.



Starts and Stops Automatically

The PHELPS light and power plant has a big overload capacity. The plant the farmer needs.

Get In the Farm Lighting Business---Get in Now---With the *Right* Plant

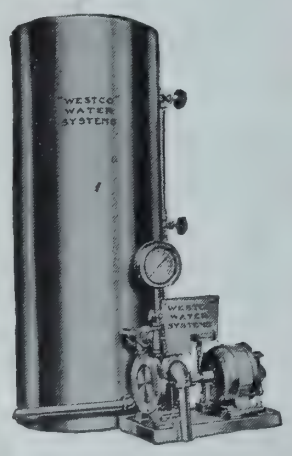
THOUSANDS of farmers have invested in electricity—in light and power. Many more are ready to buy NOW. But some are holding off. Why? Because the average lighting plant—the kind their neighbors have bought—is undersized. It is too small for the work—rated only around 750 watts.

But the PHELPS plant is a big **oversize** plant. 1500 watts! Twice the capacity of ordinary plants. Rugged—reliable—simple—at the right price.

For the PHELPS sells for $795—the small extra price guarantees the whole investment.

Power? More than is needed. Electric power or **belt power.** For the Phelps has a big Power Pulley—the big 4 h.p. engine can be run apart.

Handle these Profitable Specialties---Cash in on our Big Advertising---Link up with Our Organization.



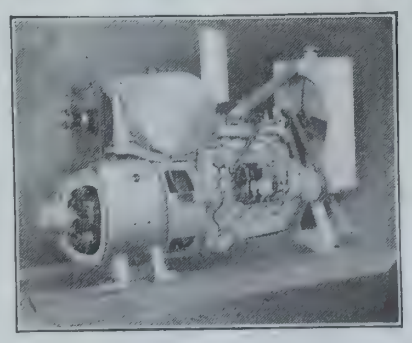
Westco House Water System

Absolutely Automatic

Now is your logical time to get into the farm lighting business for four reasons:

First: because the PHELPS plant is here—the first big capacity, sturdily-constructed plant to be produced at a price the farmer is willing to pay. A plant superior in scores of ways to any competition you may chance to meet.

Second: because the agency we offer you is a big money-maker for live men. The PHELPS plant gives you a good profit. For big installations—from saw-mills to villages—we have the Langstadt-Meyer Generating Unit—also a big money-maker. And to every farmer who buys an electric plant you can sell one of our Westco Automatic Pumps, run by ¼ h.p. motor and producing from 200 to 400 gallons per hour.



Langstadt-Meyer

The most economical and efficient equipment for propositions requiring from 200 lamps up.

Third: because we are now at the peak of our advertising campaign that is producing big results—the most powerful campaign ever put on in Canada to market farm specialties. You've seen it—back covers in all the big farm publications.

Fourth: because our dealer organization is being rapidly rounded out. Only a few of the most profitable territories are now open.

Get busy now. Write for our proposition. Tell us what you've been doing and we'll show you many other items in our lines of farm specialties that will interest you.

Remember, in dealing with Grace Motors, Limited, you're dealing with a big concern, that is going after farm business in a big way, with modern lines and in modern methods.

The largest distributors of trucks in Canada. Equipped to give the right kind of service on every line we handle.

GRACE MOTORS, LIMITED

EXPORT MANAGERS

243-255 Queen St. East, TORONTO

Distributors:

Manifold Light & Power Limited
Distributors for Western Canada
240 Main St., Winnipeg

Acme Vacuum Cleaner Co., Ltd., Distributors for Quebec, 18 Cathcart St., Montreal.

Keyes Supply Co., Limited, Distributors for Ottawa Valley, 282 Sparks St., Ottawa.

McNaughton, McKay Electric Co., Limited, Windsor, Ont.

J. H. Pollock Electric, Limited, London, Ont.

Grace Motors, Limited, are also Canadian distributors for Sterling Trucks, Fulton Trucks, Atlas Trucks, Smith Form-a-Truck, Lay Porta Power, Lay Farm Equipment, Arnold Electric Tools, Veeder Odometers, Non-Grav Bearing Bronze.

CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Published Monthly by THE MACLEAN PUBLISHING COMPANY, LIMITED, TORONTO

MONTREAL, Southam Bldg. WINNIPEG, 1103 Union Trust Bldg. VANCOUVER, 39 10th Ave. West. LONDON, ENG., 88 Fleet St., E.C. 4. NEW YORK, 111 Broadway. BOSTON, 734 Old South Bldg. CHICAGO, 1401 Lytton Bldg

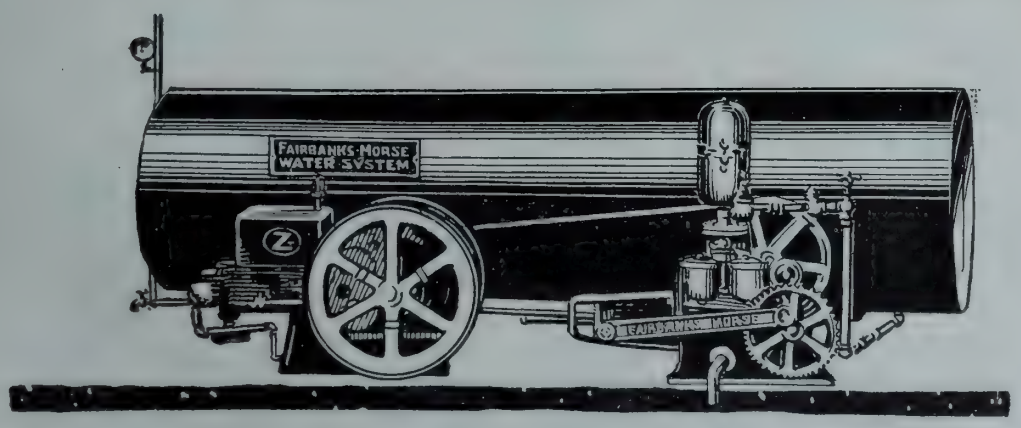
VOL. 1, No. 7 TORONTO, SEPTEMBER, 1919 Subscription Price $1.00 Per Year

Fairbanks-Morse
Water Systems

---are practical, efficient, economical---and consequently in demand among those farm or summer home owners, who are looking for a running water plant at the lowest cost.

Make this demand an asset in your business. There is a type of plant to meet the requirements of your customers.

Inquire to-day about these Systems.



The Canadian Fairbanks-Morse Company
LIMITED

Halifax St. John Quebec Montreal Ottawa Toronto Hamilton
Windsor Winnipeg Saskatoon Calgary Vancouver Victoria

NOW

MAKE a special drive for Sharples orders now! Dealers who are doing it are getting the business. Cash in on your Sharples contract ---our national and state advertising has paved the way.

Bear in mind that the Sharples Suction-feed Separator is the only one that *skims clean at any speed* ---and that is the thing farmers want now-a-days.

The Sharples Separator Co.,

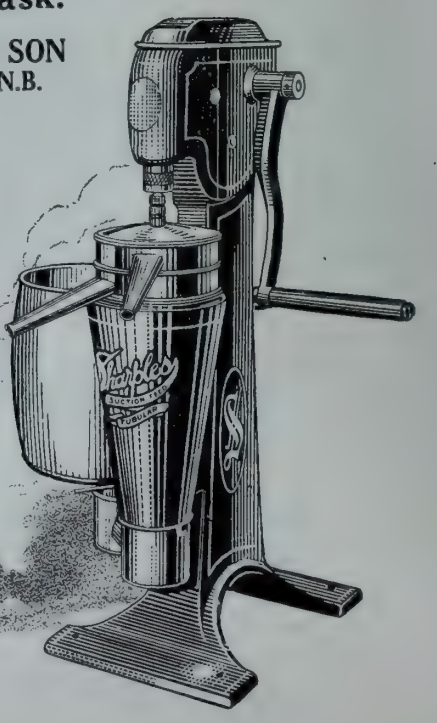
Toronto, Ont.
Regina, Sask.

THE LOUNSBURY CO.,
Newcastle, N.B.

DISTRIBUTORS THROUGH ALL THEIR BRANCHES
"Over 2,425,000 Sharples Separators in Daily Use"

J. CLARK & SON
Fredericton, N.B.

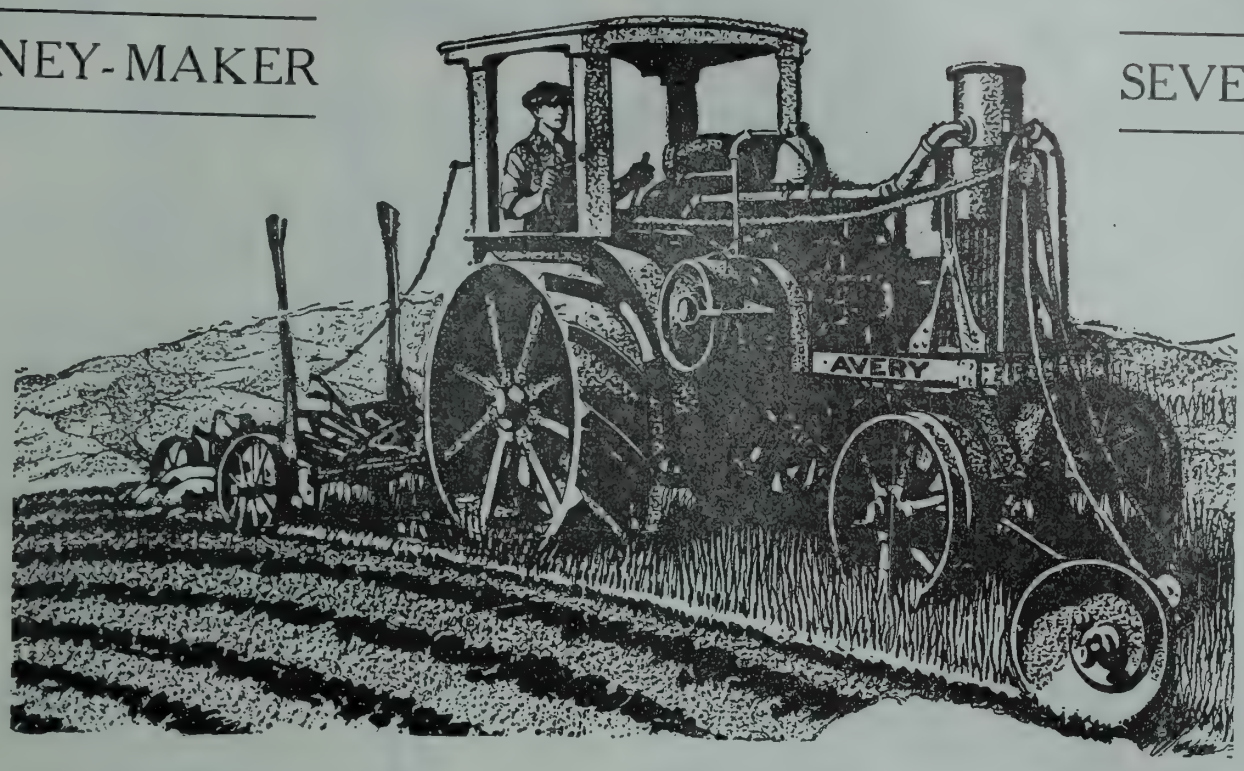
SHARPLES



"Avery" Tractor

A MONEY-MAKER

SEVEN SIZES

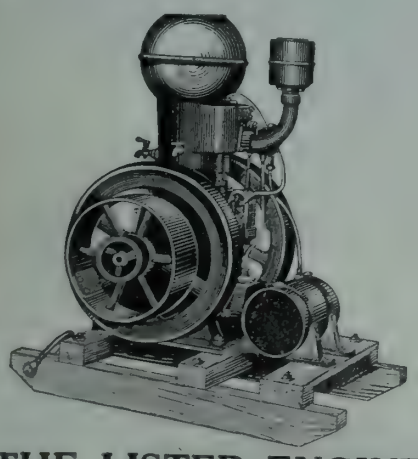


Terms being quoted for Fall delivery are especially attractive and will be bound to bring in a big volume of business.

Years of splendid record stands back of the "Avery." It always makes good — users are always boosters.

No easily broken parts on an Avery Tractor. All main parts, such as motor shell, frame, and wheels, will last indefinitely. All wearing parts, including *cylinder walls* renewable. An Avery Tractor can be adjusted, repaired, or renewed at a very low expense by the owner without the aid of a high priced expert.

Mr. Dealer, write us for full particulars re our attractive terms for Fall Delivery.



THE LISTER ENGINE

2, 3, 5, 7, and 9 H.P.—Standard Hopper Cooled, throttle governed, automatically lubricated and equipped with high tension magneto. Simple, easy to operate, economical. Embodies the quality "that makes for long life and satisfaction whenever used."

Lister

POWER ON THE FARM

MELOTTE CREAM SEPARATORS

The "Melotte" is the original Belgian-made machine—a machine with an unequalled record for skimming efficiency, ease of operation and long life.

OTHER LISTER LINES:

LISTER MILKERS, LISTER ENSILAGE CUTTERS, LISTER SILOS

Lister lines will make you many friends and business boosters.

May we mail you our agency proposition?

R. A. LISTER & CO. (CANADA) LIMITED

58-60 Stewart Street, TORONTO -:- **Also at Wall Street, WINNIPEG**

Made in Canada

DIXIE "ACE"

Brings

Dollars to Dealers

Everyone is talking about the DIXIE "ACE"—it is the "Latest and Greatest Tractor Success." It sells easier, because it fills the requirements of the average farmer better than they have ever been filled before.

The neat, graceful lines—compact, sturdy construction—and startlingly sensible service features appeal to the ordinary average farmer—the hundred-acre man, who forms 98% of the farming community. Every farmer is a prospect for a DIXIE "ACE."

The DIXIE "ACE" weighs 3,350 lbs.—has a 69" wheelbase—a speed range of 1 to 6 miles—all gears entirely enclosed running in oil—wonderfully efficient drive wheels of new and exclusive design—comfortable cushion seat and roomy covered cab—plenty of power for any farm—and the price is so reasonable that there is hardly a farm in Canada on which it would not be an investment paying the highest dividends.

Turn this over in your mind—why shouldn't you be the man to reap this golden harvest? If you are an aggressive dealer, of good local standing, write us TO-DAY. Act quickly as the season is just starting.

GILSON ENGINE

"Goes Like Sixty"

Are you making as much money out of your engine sales as you should? Are you selling as many engines as you should? Let us show you how to increase your engine sales and your Bank balance. Write to-day for our agency proposition.

SILO FILLER

The Wonderful Gilson

The Lightest Running Blower Cutter made

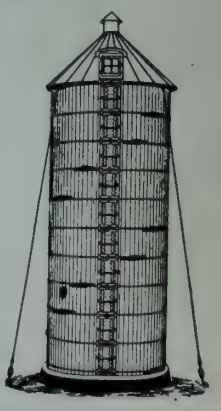
The supremacy of the Gilson Silo Filler is unquestioned. It does what has heretofore been considered impossible. Do not be satisfied to sell a substitute and only get a fraction of the silo filler business from your territory. Write for our special free sample plan whereby you can get all the silo filler business in your locality—and there is probably a great deal more available than you realize.

HYLO SILO

The Mortgage Lifter---

The Money Maker

The "Hylo" is different and distinctly superior to any other silo. The hoops automatically expand and contract with the silo—patented, combination door lock and ladder—reinforced door frame—positive anchoring system—our own wonderfully fine grade of Imported Long Leaf Yellow Pine is used. Your customers want the "Hylo"—sell them what they want and make more money.



GILSON MFG. CO., Limited,

Dept. A, - GUELPH, ONT.
Dept. AA, WINNIPEG, MAN.

Demand Grows Apace

for the

Cletrac

TANK-TYPE TRACTOR

Speed and versatility are the big things in the tractor business to-day.

Your tractor sales and your profits depend on them.

And on this basis the Cletrac is supreme.

On the farm, the Cletrac covers as much ground in a day with two 14-inch bottoms as most of the bigger, slow-moving tractors cover with three. It does a better job of plowing, of harrowing, of planting, or of harvesting.

The Cletrac is the true all-purpose tractor——not only for the farmer, but for the road builder, the contractor, the industrial manager.

It is the tractor that stands for more sales and more satisfied owners. It stands for a bigger, better tractor business for you.

We have published a large book that tells you just what you want to know about the opportunities for making money selling tractors. This book should be in the hands of every man who is or expects to be a tractor dealer.

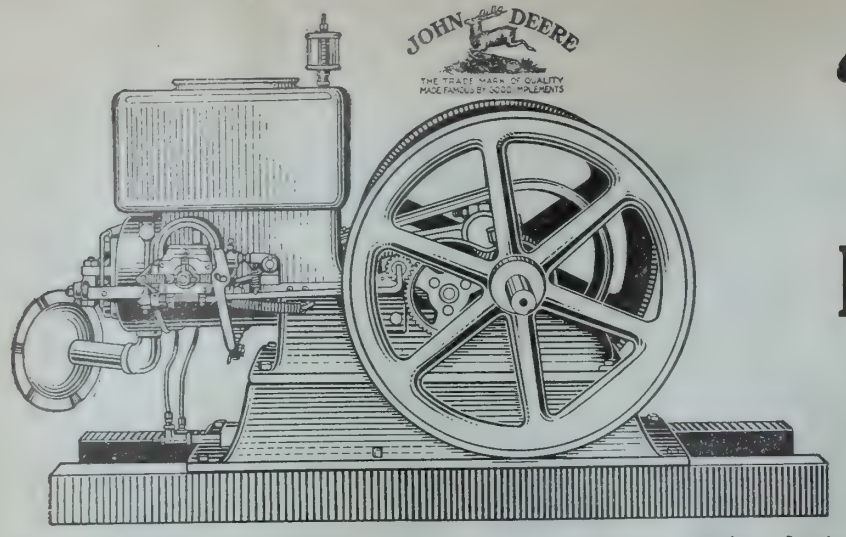
Ask today for your copy of "Sale Quality in Tractors."

The Cleveland Tractor Co.

of Canada, Limited

25 Hydro Electric Building - Windsor, Ontario

Largest Producers of Tank-Type Tractors in the World



"Waterloo Boy"

Greatest Power From Cheapest Fuel

KEROSENE ENGINES

100% Kerosene Efficiency

The **"WATERLOO BOY"** is an original kerosene engine designed and perfected on kerosene principles, and is not a gasoline engine adapted to kerosene efficiency.

The "Waterloo Boy" **THROTTLE-GOVERNOR** Kerosene Engine is simply, and carefully proportioned, and accurately built on the four stroke cycle principle—A power impulse at each second revolution of the flywheel.

They are equipped with **OSCILLATING MAGNETO,** and require no battery.

The magneto is inbuilt—not an attachment.

The **GOVERNOR** is of high speed, centrifugal type, positive gear driven, with machine-cut gear.

PATENTED KEROSENE BURNING MANIFOLD, insures fuel economy and low cost of operation.

The "Waterloo Boy" has been a Gold Medal winner at numerous competitive International Expositions. Over 25,000 manufactured and sold in a single year. Twenty-three years the recognized leader in reliable, economical power. Built in sizes from 2 to 14 H.P.

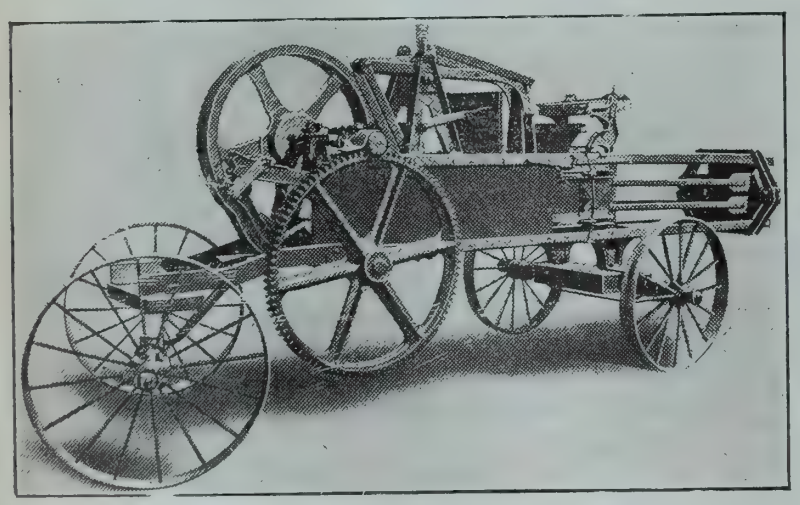
A "WATERLOO BOY" IS A NECESSITY ON EVERY FARM

TO DEALERS.—We are pleased to receive inquiries from real live-wire dealers in every part of Ontario. If there is not a John Deere dealer in your locality, let us hear from you at once. Our extensive advertising, co-operative sales and dealers' service department assure our dealers of easy sales. Every machine we sell is guaranteed to give satisfaction under ordinary conditions, to your customer.

JOHN DEERE MANUFACTURING CO., LIMITED, WELLAND, ONT.

OTHER BRANCH HOUSES—Winnipeg, Man.; Saskatoon, Sask.; Regina, Sask.; Calgary, Alta.; Lethbridge, Alta.; Edmonton, Alta.

GET QUALITY AND SERVICE — JOHN DEERE WELLAND CANADA — JOHN DEERE DEALERS GIVE BOTH



The Splendid Hay Crop

is bound to make this a banner year for Hay Presses.

"DORE" HAY PRESSES

embody qualities that ensure long service, reliability and satisfaction.

The "Champion" Noiseless Belt Power Self Feed Hay Press with Friction Clutch Pulley and Block Dropper.

The **"Champion"** is built for engines and tractors. It is the most simple, lightest, strongest and most durable press on the market.

The **"Canadian"** is the leader of baling presses when it comes to power and rapidity. The plunger makes **two strokes for each circle of the horses.**

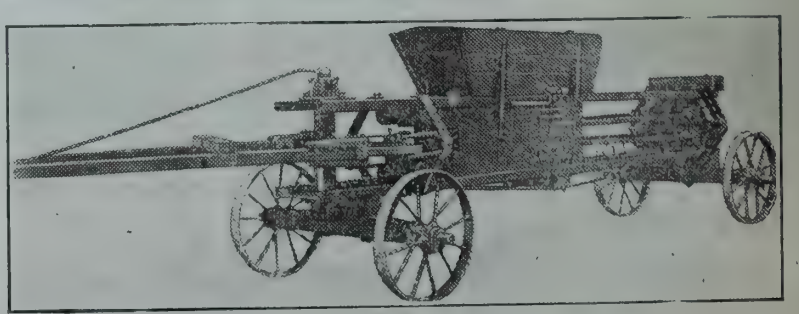
The **"La Condor"** noted for its simplicity and power. Only two working parts form its mechanism beside, the plunger, arm and sweep.

The "Canadian" Improved Two-horse Full Circle Self Feed Steel Hay Press.

Dore Threshers, Road-making Machinery, Cordwood Saws and Drag Saws are other "Dore" quality lines that pay a handsome commission. It will pay you to write for full information and prices.

It pays to handle them Mr. Dealer because both the reputation and commission are good.

Our Agency Proposition will appeal to you. May we send you full particulars? Drop us a post card.



"La Condor" Two Horse Half Sweep Power Steel Hay Press

J. B. Dore & Son, - Laprairie, Que.

A Tractor with a History

our readers want to know a whole
lot more about them and their goods,
don't forget their address, and don't
forget to tell them that we said so.
A GASOLINE TRACTION ENGINE.
The Ferguson Implement Company, Kansas City, Mo., are exhibiting a gasoline engine engine made by the Huber Manufacturing Company, Marion, Ohio, for whom they are Western agents. It is claimed to be a powerful puller, and to be very economical in operation, as its fuel—gasoline—is cheaper than coal in producing a given power. The Ferguson Implement Company will be pleased to furnish full information about this engine on application
The Huber Gasoline Traction Engine.
GEAR SIDE

A Clipping from "American Thresherman" June, 1900

A page from the first Huber Tractor Catalog, 1898

Behind the Huber Light Four is an experience in building gas tractors extending back into the nineties.

The clipping above from a copy of the American Thresherman, published in 1900, refers to a gasoline traction engine—as tractors were then called—made by the Huber Mfg. Company. Near it is a page from the first Huber Catalog showing the type of Huber Tractor first marketed in 1898.

12 H. P. on Draw-Bar

25 H. P. on Belt Pulley

THE HUBER light Four

Draws three bottoms

Turns an acre an hour

is a product of this experience. The Huber engineers have had plenty of time to eliminate mechanical "bugs." You as dealer know how important that is. Your farmer customers who have had automobile and tractor experience know how important it is.

That is a big factor in making the Huber easy to sell. It is a tractor that will make good for your customers as it has for thousands of other farmers. It makes satisfied customers and they make Huber dealers more sales.

Weight 5,000 lbs.; pulls three 14-inch bottom plows, 12 h.p. delivered to the draw-bar; 25 h.p. at the belt; Waukesha, four-cylinder motor; Perfex Radiator; Hyatt Roller Bearings, burns gasoline, kerosene or distillate; centre draft; two speeds, 2½ and 4 miles per hour.

Some good territory is still open. Write now for all the facts and interesting booklet, "The Tractor in the Making"

The Huber Manufacturing Company, Marion, O., U.S.A.

Barkley Tractor & Separator Co., Edmonton, Alberta

The Huber Manufacturing Company

BRANDON, MANITOBA

Some territory still open for live dealers

Fairbanks Scales Saved This Man Many Dollars

"Do you ever 'weigh in' your goods?" a grocer asks. "You weigh them carefully when selling, but what about checking up the weight on stuff you buy?"

"Let me tell you something from personal experience —" and then he goes on to tell how he got a credit of $10.38 on five barrels of sugar, how he saved $4.20 on a lot walnuts and something else on sal soda.

"If grocers only realized this," he adds, "they would save many dollars in the course of a year."

Tell your customers how they can profit more by "weighing in." Show them how they can save money by checking the goods they buy with Fairbanks Scales — recognized for generations as a standard in weighing. It will mean more sales and more profits for you.

Write us to-day for information about all kinds of Fairbanks Scales.

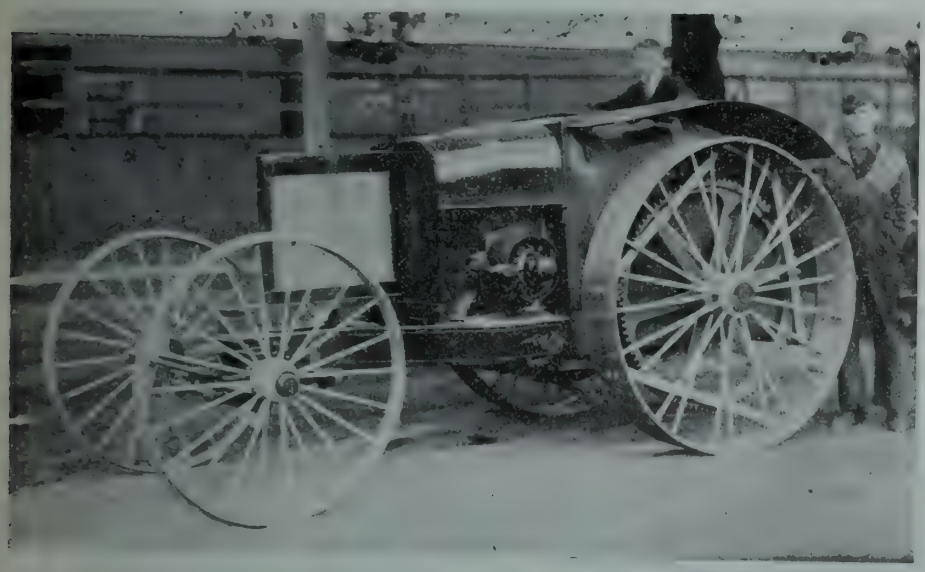
The Canadian Fairbanks-Morse Co., Ltd.

Halifax, St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria.

CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Volume I | TORONTO, SEPTEMBER 5, 1919 | Number 7

Tractors Make Fine Display at Toronto Fair



Bert Grieg was a close second, as far as the youngest "chauffeur" is concerned. He is a son of Wm. Grieg, Manager Ont. Division, Massey-Harris Co., and is driving a 12-24 Massey-Harris tractor. Chas. Serson, driver, is at the right.

By R. LAIRD BRISCOE

More Tractors Than Ever are Shown--- Here are a Few Snapped by the M. T. I. Photographer

DOUBTLESS the first thing which appealed to the farmer or the implement dealer who made a tour of the exhibits of implements, tractors, and other farm necessities as they were shown on the Toronto Exhibition Grounds, was the fact that there is not the slightest indication that prices are to become more moderate in the near future. The second thing which struck him was the great number of tractor-manufacturing concerns, both Canadian and American, which are out to make their bid for the local trade.

So far as the prices are concerned, the increase in practically all lines, over the prices quoted at the last Exhibition, show a marked jump, and the makers declare that as long as conditions remain as they are the price fluctuation is bound to be upward instead of downward.

There are two factors which go to make up the high price of implements needed on the farms, and these are the inflated price of the raw materials and the recent boost in wages paid to the bulk of the workers. As there is no indication that either raw material or the wage scale will take a drop in the immediate future, the farmers may make up their minds to keep on paying the higher prices for some time to come.

As to the second feature, the great number of tractors on exhibit, it would seem that this is the one industry connected with farming which has shown the greatest advance in the past year. While there were many exhibits of the ordinary farm implement, these exhibits were fewer than in other years, though the tractor rolled into the grounds in greater number. The dealer who purposed to take on an agency, or the farmer who planned to purchase a machine, doubtless had some difficulty in deciding among the great list of tractor offerings, for there were many varieties of the light, the medium and the heavy tractor.

This machine had the youngest driver on the grounds. It is a Waterloo Boy, driven by Wilfred Smith, son of John H. Smith, Seaforth. Wilfred is 12 and thinks it is a fine life. Mr. Bell, of the Bell Thresher and Engine Co., Seaforth, is at the right.

THOUGH the makers of all three types—the light, the medium, and the heavy—all feel that their particular weight of machine is the one which is in most demand, prospects and dealers very often had their own special preferences. The International Harvester Company representative stated that their light machine is their winner for general purposes.

A number of the makers producing the heavy tractor report that there is a strong tendency on the part of groups of farmers to syndicate on the purchase of a heavy machine, which can be operated with threshers as well as for general farm purposes; accordingly they are specializing on this output.

Simplicity of operation is the aim for which the bulk of the makers are striving, and some are proving their success along this line by having small boys as operators for the benefit of the public. This appears to be winning the approval of many farmers, as the fact that a boy of ten can drive a farm tractor is a strong argument in favor of that particular type. The one-man machine idea is another feature which other dealers are playing up strongly, while the operation of a tractor and the farm implement as a unit is being pressed strongly by other firms as the latest tendency in tractor manufacture. This feature is particularly noticeable in the Moline Universal Tractor, the machine now being handled by the Willys-Overland Company. From the standpoint of the farmer, the one-unit machine appears to have its advantages, as it permits the plow or other farm implement to be backed up whenever it gets into difficulty, without the necessity of uncoupling the implement from the tractor. So far as could be learned, the Moline is still the only tractor with the full electric lighting and starting

Here you see the Hart-Parr (handled in Eastern Canada and Ontario by the Goodison Thresher Co.) hauling itself up, as it were, by its boot-straps—and with seven men on it. Reading from left to right these men are: F. K. Gigax, operator; W. D. Colby, Goodison representative; C. F. Sullivan, Hart-Parr factory representative; F. W. Gigax, general sales manager; J. D. Lenehan, operator; A. B. Johnston—have pity on him; he's the poor prospect! and C. A. White, treasurer.

Beaver tractor, made in Brantford, by Goold, Shapley and Muir. Like most of those on the ground, it showed the engine.

George White & Sons' exhibit, showing two of their tractors.

equipment. It is unnecessary to say that this attracted much attention.

The four-wheel tractor is still very much in evidence, while one of the two entirely new machines to make its bow to the Exhibition public was a caterpillar. Some of the old caterpillar tread tractors are still on exhibit, but the new one is the Empire, an all Canadian product of the heavy type, which claims to be a six-plow machine, in distinction to some of the two or three-plow lighter machines. The Empire is Canadian-designed as well as Canadian-built; it is a 50-horsepower tractor, and in the designing of the tread the makers claim that they have overcome all difficulties in connection with the use of the caterpillar type. The Empire, instead of having the jointed caterpillar sections, has the sections connected on a steel cable; and, further, they have the drive wheels running through the tread with a roller motion instead of being driven by cogs or gears.

Apart from the Empire, the Chase has become a distinctly Canadian machine since the last Exhibition. This machine was fully described in the August M. T. I.

Another distinctly new tractor exhibit is that of the Schofield Automotive Tractor, made by the Orillia Tractors, Ltd. Motion pictures were used to show this new machine in operation, and judging from the pictures shown the machine is able to go through a great deal of work. The machine is interesting from the standpoint that the idea is quite distinct from anything else seen on the grounds in the tractor way. That is because it is automotive; that is, the power is supplied by the farmer's private automobile instead of from any power generated in the tractor itself. The tractor is a frame on four wheels, upon which the owner can drive his passenger automobile, either a one- or two-seater, a track being provided up the back over which the automobile is drawn. Then the rear wheels of the automobile are connected by chain drive with the rear wheels of the tractor and the automobile is fastened in position. The owner gets behind the driving wheel of his automobile, and he pulls away in the same way in which he would drive his car along the country road.

The Veedol Chart and exhibit attracted the chief attention in the Millen exhibit.

STILL another entirely new feature is claimed by the Avery Tractor, an American product which is equipped with the Duplex Gasifier. The claim is that this equipment permits the burning of kerosene or gasoline, as the gasifier distills the fuel into gas before it enters the engine, and thereby prevents waste.

In the way of other farm power, a number of manufacturers are playing up the importance of the syndicate threshing outfit, either with the tractor steam engine or the tractor kerosene engine, the trend in this direction appearing to be in favor of the gas power. It is reported by a number of the firms that they have not yet entirely recovered from the conditions brought about by the war. During the war their plants were turned over to the manufacture of war essentials, with the result that they lost their stride in the making of farm necessities, and as yet they have not fully recovered it.

A number report that they have later developments in their machinery which they have not yet been able to put into practice. By bringing out a two-cylinder farm power gasoline or kerosene engine, the Lister Company has shown that the trend of development for farm power is in the direction of the higher number of cylinders, and they report that it is proving more effective than the old one-cylinder type. To the farmer looking for farm power engines for general purposes, for grinding, chopping and pulping machines, there is no end of opportunities, while there are as well a number of pumping engines. There are also a number of lighting devices, showing the farmer how he may light his own farm buildings, barns as well as house, with his own power plant driven by the kerosene engine, while some of the manufacturers have gone in for an even more ambitious power plant system for the summer resort or country hotel where electric light is not available in the ordinary manner.

JUDGING from an exhibit put on by the Ontario Government Department of Agriculture, there is a strong tendency on the part of this department to encourage the raising of sheep. Coupled with this is a

Here are three of the Avery tractors shown—8-16 in front; the baby, 5-10, in the centre; and the big 12-25. Reading from left to right the men are: P. Todd, W. E. Todd, and W. J. Walker.

A Sawyer-Massey 11-22 kerosene tractor. The driver is John Sylvester, aged 16. In the rear can be seen a 17-51 steam thresher, and road-building machinery.

As we have intimated before, it pays to "hook up" the plow. The men in between these two Moline tractors are, from left to right: James Francis, O. B. Stauffer, S. W. Wilson (Ontario manager, tractor division, Willys-Overland), and F. C. Wilson.

number of exhibits by the power supplying companies of the latest power shears for the shearing of sheep. Visiting farmers and dealers will doubtless find it very interesting to study the advances in the raising of this food supply, and it is stated that the increased price in woollen products is doing much to encourage the Ontario farmers to go in for sheep raising to a much greater extent than ever before. This is mentioned only because of the shearing power implements offered by a number of manufacturers.

In the farm implements class there is a lime and fertilizer sower being shown by the John Deere Company. This is an exclusive offering built for the sowing of lime on sour land, or fertilizer on other land, or around the heaved roots of fall wheat in the spring after it has suffered through the winter. In hay loaders a number of makers are going in for the one-man implement. This is made by building a small rack under the dump, so that when the hay is carried up to the wagon none of it drops back between the wagon and the loader. The idea is that when it falls upon the rack from the loader, the force of the hay behind carries it to the front of the wagon and all the man has to do is to spread it about to suit himself. The makers claim that the simple rack-platform at the top of the loader will save the labor of one man.

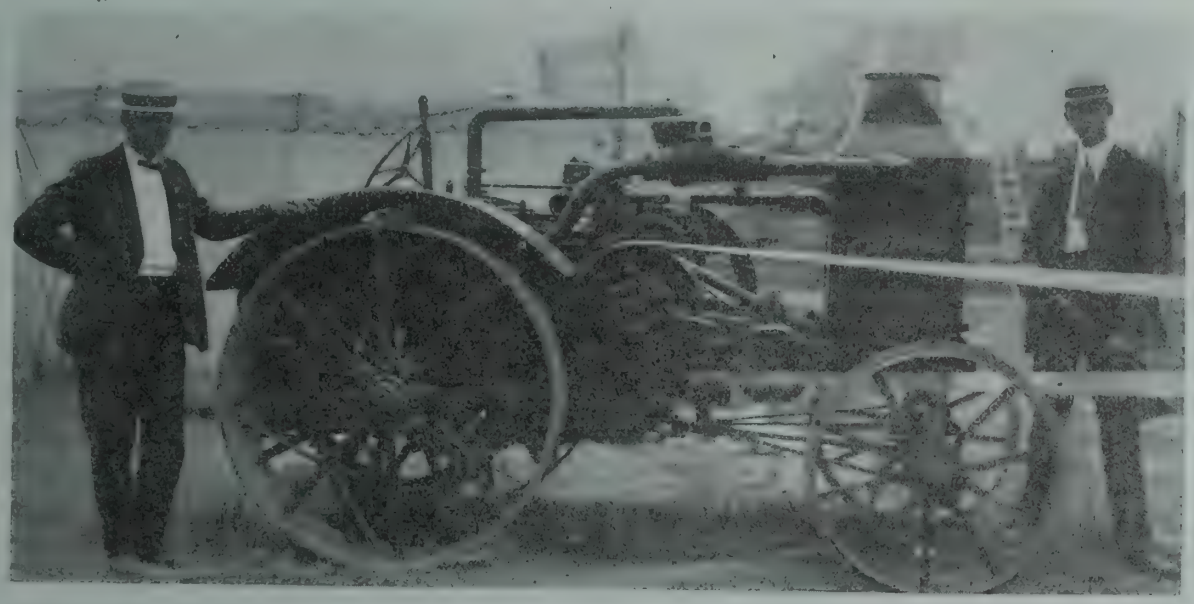
THE John Deere Company claims another exclusive feature, this being on their fertilizer spreader. The trend of fertilizer spreader manufacture now is toward the low body with the high wheel. The new Deere product has the rear wheels behind the feeder, with the drive on the rear axle, thus feeding the fertilizer out in front of the anxle and still making it possible for the high wheel to be used for more easy traction.

In the way of smaller implements, plows, cultivators, harrows, etc., there is the regular offering, with occasional innovations which show that the Canadian manufacturers are getting back into their stride and are keeping up with the times.

New Car Models

THERE were half a dozen new models shown in the Transportation Building, where most of the automobiles and accessories were shown, and in the overflow tents where several trucks and the new Nelson car were housed. Salesmen reported orders coming fairly thickly, and thousands of prospects were listed.

The forward end of the "Cletrac" is shown here in a pit; the machine is tilted at about a 30° angle. The man at the wheel is L. Smith; the other man is Frank Goddard, the other "chauffeur."

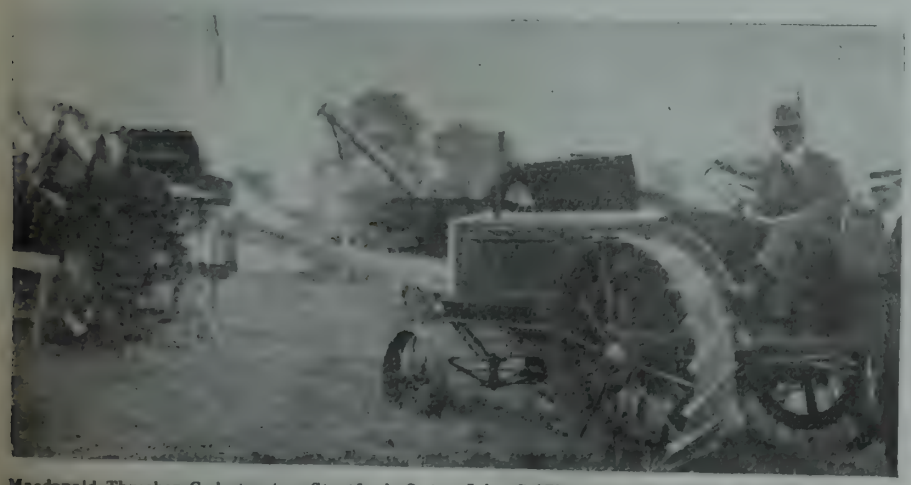


Here is a 12-20 Advance-Rumely Oil Pull, showing C. L. Reganten, of the Ontario branch (mechanical end), at the left, and N. Hamilton, Eastern Canada sales manager, at the right.

Having mentioned the Nelson already, we might as well start with a brief description of this gas engine novelty. This car is the personal product of A. F. Nelson, the well-known American automotive engineer, and production is being kept down to five a day. Their boast is that "they *build cars*, and don't *assemble* them." Everything on the car, except the tires, is built in the Nelson factory.

The Nelson has a four-cylinder, four-cycle motor, and is rated at 16.2 h. p. (English rating), which is 29 h. p. by our rating. The engine is an aero engine, and has been used in these cars for about three years past. The generator, motor, and starter are all in one block. The vacuum feed is in front, just behind the radiator. The clutch is in the rear, in the same case as the differential. The car is equipped with cantilever springs, with snubbers. Every working part is enclosed. Weight is 2,255 pounds, and the manufacturers claim that it will attain a speed of 45 miles per hour with spark retarded, and 65 "full out." Starting in high, practically from a standstill, the Nelson is claimed to have attained a speed of 41 miles at the top of the Hamilton "Mountain."

The cooling system is Thermo-syphon, and the chance of corrosion is stated to have been eliminated. The car is equipped with a 12 volt Willard battery. It is claimed by the manufacturers that it is not necessary to grind the valves until the car has gone at least 15,000 miles. The price is $1,985, plus war tax, F. O. B.



Macdonald Thresher Co.'s tractor, Stratford, Ont. John Griffin at left; T. Finlay seated on tractor.

The Heider Manufacturing Co. exhibit, Waterloo, Ontario. Reading from left to right: I. Woolner, Tom Maxwell and W. McDougall. The operator, in the cab, is J. Wilkie.

The new Canadian-made tractor, the Chase, manufactured by the Chase Tractors Corporation, is shown here climbing a pole at the Fair. H. E. Gordon is standing beside the pole. William Haney is the operator.

Toronto. The Acason Truck people will handle the distribution in Canada at present. R. W. Dollery represented the Nelson organizer at the Fair.

The Jordan Silhouette attracted large throngs. The Jordan Playboy—the roadster—was on exhibition at the show-room of the distributors, G. E. Gooderham, Richmond Street West, but as far as the M. T. I. representative noticed was not at the Fair. Both cars have wonderfully graceful lines, and the seven-passenger at the Fair had the solid military wheels. The Silhouette can be procured in Egyptian bronze and Burgundy old wine, the Playboy in Scarlet and also Burgundy. The leather is bright, hand-buffed, with narrow French pleats. There are Marshall cushion springs. The car has a modern, high-speed, six-cylinder motor, cast en bloc, 3½ by 5¼. Wheel base, 127 inches; weight, 3,150 lbs. The Jordan introduces the Crane spring shackle, which is claimed to be a rattle eliminator.

The Playboy sells at $4,300. The seven-passenger is $4,100 with wooden wheels; $4,250 with wire; $4,300 with solid steel. These prices include bumper and tires, cord if desired.

THE new Overland 4, which has been talked about for the past year or two, and on which no price was announced until August, attracted huge crowds. The price has been set at $1,095. It was originally intended to market this car in the States at around $500, and $700 to $800 in Canada, but increased costs of production altered this and, in addition, the manufacturers will make quality additions for the higher price.

The "4" has the motor cast en bloc, L head, removable. There is a 3⅜ by 4 power plant. The motor, clutch, transmission and universal joint are all lubricated from oil in the crankcase. Cooling system is thermo-syphon; finish, baked enamel. The differential is spiral bevel. The car weighs 1,825 pounds, has 130-inch spring base and 100-inch wheel base.

The Willys-Overland Company will likely put a new roadster on the market in Canada in the course of the next two months. This is expected to be called the Knight 4; it was not shown at the Toronto Exhibition.

The Oldsmobile Company had a new model on exhibition, the Oldsmobile 8, Model 45B. This car made a run under Ontario Motor League auspices during the last week in August, and showed better than 21 miles to the gallon. This new car—the Thorobred—while travelling in high gear is claimed to throttle down smoothly and silently to one or two miles an hour. By reason of an exhaust jacket intake manifold the motor warms up quickly. There are long semi-elliptic rear springs which add distinctly to the riding comfort. The clutch is leather-faced, cone type. The wheels are natural wood finish, artillery type, extra large hub flange, with twelve heavy spokes.

THERE are three new models of the Cole Aero-Eight—the Aero-Eight Tourster, 7-passenger; Aero-Eight Sportster, 4-passenger, and the Aero-Eight Roadster, 2-passenger. The motor in each model is an eight-cylinder, high speed, 3½ by 4½. "L" heads removable, affording easy access to valves and combustion chamber. Wheel base is 127 inches. There are large pockets in the doors of each model, and a special impedimenta compartment in back of front seat. In the roadster there is a gold compartment with opening at right side of the car.

The man in the cab of the "Dixie Ace" is H. A. Metcalfe; at the right is R. Ritchie. This tractor is made by the Gilson Manufacturing Company, Guelph.

The general design of all models is the well-known Cole—aero-type, with lower beveled panels and high cowl.

The Standard Eight appeared at the Fair, in Canada, for the first time. It is manufactured by the Standard Steel Car Co., Pittsburgh, Pa., and distributed in Canada by the Bailey-Drummond Motor Co., Toronto. It is a powerful, smooth-looking car which immediately attracted a great deal of attention. The Canadian selling price is $4,300. The motor is 8-cylinder, eighty h.p., dynamometer test. Cylinders, "L" head, cast four en bloc. Connecting rods are drop forged, standard steel. The frame is of special standard steel, and the springs special silico-manganese spring steel. Wheel base, 127 inches, wheels of extra strong artillery type. Other interesting features are:

FUEL TANK.—On rear; 20 gallons capacity; vacuum feed system; contents indicator on tank. Gasoline filter and water trap conveniently located in line, easily cleaned.

WATER PUMP.—Double centrifugal and cast integral, thereby reducing water connections to the minimum, but delivering water direct to each bloc of cylinders. Only three hose connections.

This shows an 8-16 3 H.C. tractor, with C. I. S. Banting, of the International Harvester Co. staff, standing by the wheel.

Here you see the Schofield Automotive Tractor, used with a Ford car, pulling a self-binder. This attachment sells at $448. The manufacturers put on a film exhibition for all those interested.

Rosenheim Becomes a Tire Pessimist

Pinched (With Permission) From "Timken Magazine." Sketches by CLYDE E. DARR

"I SEE by the papers," said Meyer Goldman to his friend, Max Rosenheim, proprietor of the Scotch woolen Mills, High-Grade Men's and Boys' Clothing, "that there is some good news for you plootercrats what drive ottermobeels."

"What is it, Meyer? Is it that Congers is goin' to repeel the five per cent. tax until all the Republcans get their 1920 models? Me I never believe nothing in the papers nowadays except the date line and I look at the callender to be sure of that, what with to-morrow's paper on sale at nine o'clock the night before and the Sunday edition printed on Thursday. Such a habit of lying they got into durin' the war that they can't get over it. Remember how we used to get all excited by the papers tellin' us of the brilliant stratichy of General Foash who had the enemy enveloped in the Swassons salient and all ready to mail R.F.D. to Paris, and the afternoon edition would deny it and say that he spent the day playin' pinochle with General Pittain at Shalons. What is this here, now, good news, on which I am already prepared, you understand, to discount 25, 10 and 5 off?"

"It is that the big tire manufacturers announce they have reduced their prices. Which I think is a good example to clothing dealers."

When Morris Feinberg or Arnheim Brothers & Arnheim make me the offer to reduce prices before I ask it, right away I say: 'What is the matter with the goods? Tires they ask too much for we know, but when they cut the price just at a time when the winter-stored wheels is blockadin' traffic on account of blowouts, I feel that there is a ketch in it somewhere."

"Well, you ain't going to make it the kick because you can buy your tires cheaper, are you?"

"No, and I ain't going to kick if I have to pay more, because I find in this tire business that it don't get you nothin' no matter what you kick about. If I give the same kind of goods and service in the clothing business that you get from tire dealers, soon would Rachel have six hundred dollars exemption in her own name and I would be lookin' for a job after the sheriff locks the front door.

"The manufacturer puts a five-thousand-mile guarantee on his tires, but the dealer says it is only good if you keep certain number of pounds air pressure, and if he finds a slow leak in the right rear he tells you that is probly why the left front looks like it was bit by a horse, and the only ajjustment he can make is to 'low you six dollars and thirty-nine cents on the old tire if you buy a new one, which will be six dollars and forty-two cents higher than last week on account of the rubber gatherers' strike at a time just when the rubber nuts was ripe on the tree."

"Rubber is tapped from a tree, Max, just like maple sirrup."

"Sure, I know it. I was just talkin' in a similar showing what to expeck when you try to get a mileage ajjustment. Always you are a liar. If you run a hundred miles on ashfelt pavement and a tire busts, the dealer can prove by seven people that you run up a dark alley gettin' away from a traffic cop and hit a broken milk bottle.

"I used to wonder what had become of all them there clarevoyants and seventh sons of seventh sons what was put out of business by the police, but when I get me ottermobeel I find out that they have all got good jobs in tire service stations. You never need to tell them nothin.' They just lay hands on the damaged tire, shut their eyes and describe every one of the seven thousand eight hundred and forty-six miles the tire has run, notwithstanding the fact that you only bought it last week.

"They don't reckoned skid chains, they don't reckermend relining, they don't reckermend retreading, they don't reckermend patching. The only thing they reckermend is to buy a new tire of the kind what they are selling; and they are tipping off their friends that it is pretty well known in the trade that prices will advance ten per cent. the first of the month due to the liftin' of the embargo to Greenland and Carranzy breakin off dipplermatic relashuns with Akron.

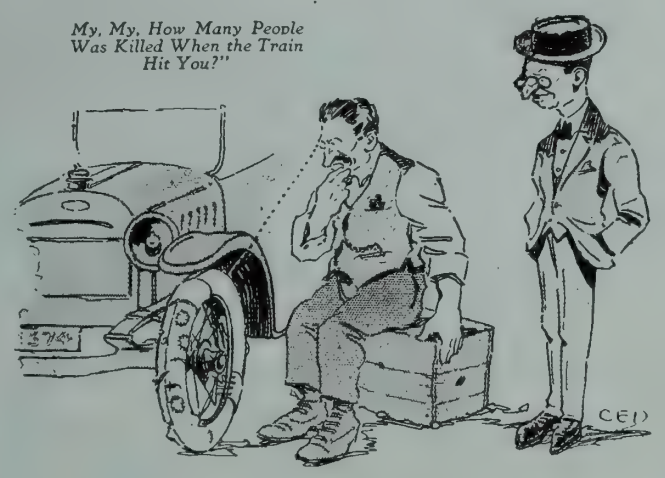
"Always it is more trouble than the thing is worth to get satisfaction from them tire fellers. I remember when Leon Feldkamp buys him a guaranteed tire from Fickelbaum & Greenhutt and in two weeks it looks like an airdale pup had used it for a teethin' ring.

"'My, My,' says Fickelbaun, 'how many people was killed when the train hit you, Leon?'"

"'A bum tire it is that is all,' says Leon, 'and make good you must if you are an honest man.'"

"'Yell, now, I must proteck the firm's interest, and be sure,' says Abe, and he gets out a complaint blank what looks like a chattel mortgage so full it is of 'whereas,' 'therefores,' and 'furthermores.' You must make it the sworn afferdavit that you haven't used skid chains; that the children aint whittled the nobs off to use for erasers, and that you have always complied with regulashun G17 on page nine which stiperlates that if you fail to use washed air your guarantee is nix. The tire should have run five thousand miles, and I don't understand why it didn't. And since I don't understand, I can't take the responsibility of givin you a new one. Mebbe there was a defect in the rubber, but you see I don't know. I tell you what I do; You buy a new tire on which I give you a discount of two per cent. from list price. Then I take this here tire and send it to our chemist. If he finds it is bum stock, I take the matter up with the general manager and I'm pretty sure he will make it all right as a favor to a friend of mine. Our chemist is now in South America and he won't be back till three years from next March, but I'll get a report from him within six months after he gets back.'"

"My, My, How Many People Was Killed When the Train Hit You?"



"Well, there is tricks in all trades, as the feller says," remarked Meyer wisely.

"The feller what said that died in 1892 and he didn't leave any insurance because he thought the twenty-year payment was a skin game that was meant to bust up after he had paid in his nineteenth premium. Some day there will be a tire manufacturer who will have faith in his own goods and a belief that ottermobeel owners run at least eighty per cent. honest. He'll put a five hundred mile guarantee on his tire that is uncondishnul, and a five thousand mile guarantee against defects. And the other tire makers what are tryin' to make first-class goods will do the same.

"Buying tires is always a gamble, I say, Max."

"Sure it is. But never do I like to gamble with a feller who has his own marqed cards. Especially if he is a crook like that same Abe Fickelbaum. He sells me two cord tires once, and if Rachel know what I pay for them right away she would want a dimon necklace seein I got so much money. Hardly do I get away when both of them hiss like a snake and go flat. What is the satisfackshun I get?"

"'It's all your own fault,' he tells me. 'With new tires you run sixty miles an hour. Don't you know when you first put them on they're a little stiff?'"

"No, I don't," I tell him, "but I know that the feller who sells 'em to me is a big one."

THE WAY OF THE WORLD

"ALL our straw hats marked away down. $3 hats to go for $1 in this clearing out sale."—Advertisement.

Of all the things that make me sick, and turn me boilin' mad, and make my countenance and purse alike feel flat and sad, it is to read such things as this—I feel most awful mean to think my joyous braided hat is only worth one bean.

It's only just a month ago I tried to make a splash, and peeled three legal dollar bills from off my scanty cash.

And when I donned that three bone lid I felt just like a sport, or like a fashion plate that walks on Broadway in New York. But every grump that meets me now, and every ragged kid, will make a nasty face and snort: "Oh you one dollar lid!"

The old hat was a fearful thing, it was a sight to see—it looked as though it had been worn way back in '93. But even so it makes me sick, it gives my brow a pain to think of those two worthy beans I breezed away in vain.

But every dog has had his day, and so has every hat, the trouble comes when these here things don't know just when to scat.

You may be worth a pile to-day, with money in the bank, you may have quit the common clay and be a man of rank. But your time comes, and out you go with dull and sickening plunk, to camp with other has beens upon the pile of junk.ARK.

BERESFORD DEMONSTRATION

BERESFORD, Man.—The gas tractor demonstration held here recently, during the annual plowing match, attracted considerable attention. Three tractors entered—the Fordson, Cleveland and Ford-a-Tractor. The Fordson was represented by Mr. Nearing, manager of Western Motors, and operated by Jas. Brydson. It pulled a two-furrow Oliver Fordson plow. The Cleveland was represented by Mr. L. McQuarie and operated by Olsen Lozier. The Ford-a-Tractor, of J. A. Adshead, was operated by G. Hartrick and pulled a two-furrow Cockshutt horse gang.

"No, I don't," I tell him, "but I know that the feller who sells 'em to me is a big one."

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A POPULAR SLOGAN

THE "Sell-for-cash-in-the-Fall" slogan which featured our August issue so prominently was one of the most popular pieces of advice and suggestion ever handed out to motor, tractor and implement dealers. Scores of dealers throughout the Dominion have adopted this as thoroughly sound. So, we want to keep right at it. All dealers always want to sell for cash, and there is no time better than the fall to do this.

TRACTOR DEMONSTRATIONS

THERE are plenty of tractor demonstrations being held every year through the United States—and a proportionate number in Canada—and the dealers, farmers and manufacturers are commencing to wake up to the fact that most of them don't amount to anything. The faults are many. The recent "National" show at Wichita, Kansas, was very poorly attended and such papers as "Motor World" frankly announced that it had "flivvered." The reason was that most of those in attendance were manufacturers; there were not sufficient attractions for the dealer and the prospective power farmer.

Another fault was that most of the tests were not real tests. Almost any tractor can go out and pull a few ploughs along in average soil for half an hour or even two or three hours without getting into difficulties. At some of the Western Canadian demonstrations and fairs this was done differently.

Another fault is that the demonstrations are so prone to show what the tractor can do on the draw bar; they should pay special attention to what can be done with belt work. It is difficult, perhaps, to arrange for such work as silo-filling, wood-cutting, etc., at the usual demonstration and contest, but trouble so taken would be amply rewarded. The forty-day-a-year tractor isn't a sound investment for the mast majority of farmers. He wants the 365-day-a-year kind, and he won't be "sold" on the proposition until he is shown every way he can use his tractor.

There are two demonstrations in Ontario during October where there will almost certainly be a very large attendance—at Ottawa and Chatham. Some months ago we editorialized along the above line, and in this connection it is of interest to quote part of a letter which the M.T.I. has received from F. C. Nunnick, secretary of the Eastern Ontario and Western Quebec Ploughmen's Association, which is staging the ploughing match, tractor and farm machinery demonstration October 14, 15 and 16 at Ottawa. Mr. Nunnick says:

> *". . . . . regarding tractors demonstrating work other than ploughing. Should say it should be done where it is possible. Tractors with pulleys could be arranged to demonstrate what other lines of work they are capable of performing. We hope to have demonstrations of this latter nature conducted."*

As Prof. Day, formerly of O.A.C., Guelph, is managing this part of the "show," something really good can be expected.

DIAGNOSING AUTOS

A PHYSICIAN to diagnose the ailments of an automobile. That is what is coming in the automobile world in the near future, in the opinion of garage men and car owners who have given thought to the subject, according to R. W. Gould.

It is pointed out, particularly by garage men, that very often an automobile is driven into the garage for repairs. The owner tells the man on the lower floor that the steering gear is loose. Upstairs the car goes to the mechanic with a note to the effect that the steering gear is loose. He looks the car over, nine times out of ten he finds a little play. He tightens this up and the owner receives the car and pays his bill.

He no sooner gets out into the road than he finds that the car has the same old trouble. Back he goes full of righteous indignation to the garage man and the car is overhauled again. The first effort having aroused suspicion the second examination reveals the fact that the trouble is not in the steering gear at all. The fault very clearly lies with the owner, who did not know what was wrong with his car and whose diagnosis of the trouble was grossly in error. The result is that the owner pays double, the garage suffers in reputation and no one is satisfied.

A garage mechanic, no matter how careful and efficient he may be, cannot be expected to generally overhaul a car in order to ascertain whether or not the instructions he received are correct or not. He is in the same class as the druggist, who does not examine the man who comes to him with a doctor's prescription to ascertain whether or not it is the proper medicine for him to take in his condition. He takes the diagnosis of the doctor for granted and fills the prescription. The automobile owner who ignorantly prescribes for his own car and is not satisfied that he is correct, runs the same risk of disaster as the layman who prescribes for himself. Fortunately in the latter case the law does not permit the layman to order for himself various medicinal mixtures, the trouble must at first be diagnosed by one who is trained in the work.

It will not be long before up-to-date garage men and automobile manufacturers and car owners themselves will demand that they have the services of an antomobile specialist in order to discover beyond question the ailment from which a particular car is suffering. If this is finally done, much money will be saved and more satisfaction will result both to the garage man, the manufacturer and the owner.

"Motor World."

Great! But it doesn't mean anything.

GREAT DEMAND FOR NEW CARS

WITH the production practically a year behind and an increase of above normal of the call for new cars, the manufacturers are unable to meet the demand for new cars. In many cases orders cannot be filled for months to come; in one case, dealers will not even take orders for certain types of cars. Dominion Day usually marks a point when the demand decreases, and until the first of the following year, the output is able to keep ahead of the orders. Not so this year, however, for orders continue to pour into the factoris.

A prospective buyer usually has a certain car in mind. He has made his decision after weeks' of careful selection, and though he does not relish the wait for his car, he does not know of another make that can take its place.

At least ninety per cent. of the cars now manufactured are worth the money that is being charged, says the well-known authority, the "Automobile Dealer and Repairer." Present-day automobiles are the result of many years of careful experiment. Every designer has had the benefit of experience and few mistakes are repeated. There is a general trading about of workmen and managers, so that it is safe to say that there is no car with outstanding features so important as to place it far ahead of other cars in its class.

The buyer who wishes a certain car but finds that he cannot obtain it for months to come need not feel disappointed for there is at least one car on the market which will take its place. He need have no fear that the substitute will be an inefficient machine, for the day of mistakes and poor machines is past.

100 CARS AT TEA!

THERE are some country auto dealers who haven't yet awakened to the fact that there are no better prospects for cars than the modern farmers in his community. And farmers are buying *good* cars, from $1,500 to $2,500, a representative of the M. T. I. learned on a recent week's trip through a part of Central Ontario. Many farmers said that very soon every progressive farm-owner will have at least two cars—the second, an inexpensive one for the hired man! The district around Valetta (in Kent County, Ontario, near Chatham) is but one example of hundreds throughout the Dominion. On the afternoon of July 7 there was a tea meeting held on the lawn of the historic Valetta Presbyterian church. There were 100 autos, more than half medium priced or fairly expensive makes, parked in the grounds *before* the tea meeting commenced. We wonder what the shades of departed buck-boards and democrats would think if they saw this!

These 100 cars—and others continued to arrive during the tea—speak well for the prosperity of this part of Kent County.

And they also speak volumes for the good selling brains of the auto dealers in that community!

ABUSING A TRACTOR

PRINCIPALLY because that wasn't his name, we'll call him Smith. Mr. Smith bought an automobile. He paid $2,150 for it. He allowed no one to drive it but himself.. He kept it in a new garage—a weatherproof structure with a cement floor. Every 500 miles he changed the oil in the crank case. For the first 1,000 miles he ran the car no faster than twenty-five miles per hour.

Then he bought a tractor. It cost $2,900. He hired a tramp mechanic at $3.50 per day to run it. When not in use, he left it in the old corral back of the barn. As long as nothing went wrong no one thought of changing the oil. And the second day he had it he took the heaviest plow on the farm down to an old alfalfa field, put the discs down as far as they would go, and said to the driver, "Now step on her! Let's see what she's good for!"

Smith is rather a common name.

DEALERS' PROBLEMS

WE want to direct all readers, particularly those handling implements, to the article by Hugh Rorison, of Moose Jaw, appearing in this issue. He discusses a very vital problem, with real knowledge and real figures. If there are any other aspects of this problem which dealers would care to discuss in our columns, we trust they will feel perfectly free to do so.

Is Margin on Sale of Small Implements too Low?

This is the Second of a Series of Articles Discussing Implement Dealers' Problems

By HUGH RORISON
MOOSE JAW

SMALL implements are those lines of farm machinery tools, exclusive of tractors, threshers and implements, pertaining to power farming. Practically all of the farm machinery manufacturers in Canada make power machinery, also, but it is not with this I will deal.

The trade in small implements in Western Canada is practically controlled by five firms, all (now) with factories in Ontario.

Their medium for reaching the ultimate purchaser is first, through their branch house, placed in certain convenient trade sections, with a local manager appointed by the head office on salary. (The head office of two of the firms is in the United States, although their factories are in Canada). These branch houses carry the stocks of implements and repairs, and their staffs appoint the local agencies, the next link in the chain, through whom the products of the factory reach the farmer.

The local agent, in dealing with his branch house, does so under certain agreements or contracts. These contracts are of three general types:

1.—A straight wholesale contract.
2.—A note settlement contract.
3.—A straight consignment commission contract.

The wholesale contract is of course a straight "buy and sell" agreement. The prices and discounts are approximately the same as under the note settlement contract and while there are some advantages in marketing under it under a rising market, this is offset on a declining market.

The third type, the straight consignment contract, is in use by one large firm only. The agents appointed by this firm receive such goods as the branch staff consider judicious. These goods belong exclusively to the company and the freights are paid to the destination by them. On the sale of these goods he receives a certain percentage in remuneration, depending slightly upon whether he is in a place of business supplied by the company or one supplied by himself. The percentage varies on the sale of different goods. There is a further percentage paid on the cash remitted, but for this the agent must assist in collections of notes, drive collectors, supply equipage, etc.

PREVIOUS to 1914 it was generally considered a most unprofitable contract, but had certain advantages in that there were no risks attaching to collection.

The percentages allowed are low but with the rising cost of machinery the percentages, while not increased, have made for a larger remuneration on the sale.

At the end of the firm's financial year the commissions earned are payable to the agent in cash.

It is with the second style of contract I will deal more particularly, as it is more generally used than any other.

On a note settlement contract the goods are invoiced to the dealer in the regular way, but he, under his contract, remits all notes and cash to his firm. They in turn carry the stock on hand at settlement time under the agent's note, as a rule without interest, and remit to the agent farmers' notes to the amount of the difference between the cost and retail price. It is the agent's duty then to collect these notes and from the proceeds he has his return for services rendered, paying fees, etc. The firm of course have approximately six months to a year after the notes are received by them to reject such as they deem poor collectible paper (they being sole judge) and they can turn these to the agent as part of his payment for his services.

As I stated this contract is the one in most general use, being the type in use by four of the five firms controlling Western trade.

It looks like a rather one-sided and unreasonable contract and it would certainly be such were the terms lived up to completely. In practice, the agent, especially if in anyway responsible, holds most of the cash received to cover his freight charges, running expenses, etc., and remits to his firm sale notes enough to cover the wholesale cost of goods, said notes being taken up by the blockman at final settlement. He pays in cash (presumably) for any difference that may still be due the company. This, as I say, is the general type of contract and it is the margin on this that I will illustrate.

PRIOR to 1915 the margins on this contract (that is the difference between the wholesale and retail prices) while far from being liberal were at least passable, and an agent with proper handling of his business could, on a reasonable volume of turnover, make his business pay a living profit. But as the price of machinery advanced—and this is where the shoe pinches—the margins remained stationary or were reduced. I can explain this better by several illustrations which are typical.

Take a drill which, taking average freight to a number of agencies, had a margin in 1914 of $21.50 and paid a gross percentage of profit on retail sale of 14.14 per cent.

1917	margin	$10.00	Percentage	5.21%
1918	margin	$14.10	Percentage	6.35%

A Wagon:—

1914	margin	$17.75	percentage	15.30%
1915	"	15.75	"	13.81
1916	"	15.75	"	14.60
1917	"	10.75	"	8.81
1918	"	11.50	"	7.
1919	"	app. 14.	"	7.3

A Binder:—

1914	"	$21.00	"	12.35%
1916	"	42.00	"	21.64
1917	"	19.00	"	9.80
1918	"	11.40	"	4.49
1919	"	app. 18.50	"	7.

Now the cost of help, of living, and the general expense of business has not remained stationary or decreased. If in 1915 it cost us 17 per cent. of our sales to cover the cost of doing business—which included a salary to ourselves. salary of help, interest on money put in the business or borrowed—it will to-day cost us equally as much.

That is, if it cost us $17.00 to sell $100.00 worth of goods in 1915 and the same article sells for $200.00 to-day, it will cost us $34.00 to sell it to-day. I think this will be generally conceded. If that is the case, where do we as implement agents stand? I think it is fair to concede that if the retail implement dealer is serving a necessary place in the trade he should receive suitable remuneration. Is he?

THERE is a reason for this unfortunate state of affairs. The dealers are unorganized, speaking generally. The farmers on the one side and the manufacturers on the other have a high organization. Therefore, to satisfy to some extent the farmer's cry for cheaper machinery, the dealer is made the goat.

Now, I believe that the lack of service in the retail trade, particularly in the smaller towns, through poor, or no representation, will more than offset the little advantage the farmers should receive.

If the farmer has to go 25 or 50 miles for a repair he should get 3 or 4 miles away, the loss of time on one trip alone will offset any gain he may have made on the purchase of the article for which repair is afterwards required. The better class of dealer is being forced out of business. He cannot remain on the margins.

I submit, therefore, that a total revision of contracts is necessary. Personally I think it is to the interest of all farm machinery manufacturers to first make a proper investigation of the costs of retail sale of farm implements, and then allow a percentage over and above this as a profit to the merchant. Something will have to be done.

There will be at least two more articles in this series: The Evils of Low Discounts on Small Farm Machinery and Parts; Should There be a General Increase on the Margin on Sale of Repairs?

Implement dealers are invited to send their views on these vital dealer questions. All worth-while views will be published.

The Little Old School House Was All Lit Up!

(*AND IT WAS SOME AD.*)

By E. H. SCOTT

IMAGINE the effect on a group of farmers, and their wives or sweethearts, when in approaching the old school house by the cross roads, to take part in a dance or entertainment, they observed from afar that it was brilliantly lit up, with gleaming white rays shining through every window, a radiance that could only be caused by electric light. They could not be otherwise than impressed and remain impressed throughout the evening.

It is in order to obtain this result, and pave the way for future sales, that the garage firm of Royen and Smith, Gull Lake, Sask., has inaugurated a plan to demonstrate the Lalley Light and Power Plant, for which they are agents) at every country dance, entertainment, or sport's day within reach of their town. As a direct result of this system the firm claims to have made six sales within a few weeks.

The system by which this demonstration is brought about is easy. The firm has converted a Ford Coupe into a demonstration car, with the complete lighting plant enclosed in a neat cabinet in the rear. A local man is employed to keep this car constantly on the road canvassing for business, and part of his work is to keep tab on any public gatherings at any country point where there is no electric lighting system in order to put on his demonstration. The agent who is thus employed is an expert electrician, capable of putting in temporary wiring with a view to safety first, and the brilliant effect he achieves in contrast to the old lamp-lighted building is sufficient to set the entire community talking.

All that it is necessary to do is to run the car up to the rear of the building and make the wire connections. The demonstration plant receives power from 16 batteries.

Between dances, or before or after an entertainment, those in attendance flock around the car to see the operation of this simple and compact little machine that furnishes such a flood of light. A part of the lighting scheme is to illuminate this exhibit, and the attendant is constantly on hand to explain the operations of the plant.

As a result of these demonstrations, the agent is enabled to show his plant to the best advantage, and to a great number of farmers at one time instead of having to canvass each of them separately during daylight hours without being able to show the lights in full operation. As a result of these country demonstrations, so many prospects are picked up from a wide range of territory as to keep the agent constantly on the road visiting them.

The demonstration car was put on this spring for the first time, but the results achieved, and the business in prospect, has more than warranted the expense,

Selling Canada on the Motor Truck Idea

By B. J. PAULSON

THE motor truck idea is still new in most farming communities in Canada. But it is the coming idea just the same. A time will come—and not in the very distant future either—when motor trucks will be considered almost as necessary a part of a farmer's equipment as the grain binder.

Of course there are plenty of farmers who will say: "My father and my father's father before him used plain ordinary farm wagons and did all their hauling without trouble. What was good enough for them is plenty good enough for me. No sir! I don't want no motor truck around my place!"

This farmer frequently forgets that his grandfather probably used a cradle-scythe to harvest his grain with, cutting, perhaps, two acres in a day if he had a hardy constitution and was a good worker. He forgets that he, himself, used a grain binder instead of a scythe and that by so doing he harvests ten acres of grain for every one acre that his grandfather cut with the cradle. If someone should come along and steal his binder some fine night in the middle of harvest and leave a cradle-scythe in its place this farmer would sure raise an awful howl—you'd be able to hear him all the way from Quebec to Calgary. And yet he'll tell you that what was good enough for his father and his grandfather is good enough for him!

Oh, well, let him have it his own way—before he knows it he'll buy a motor truck and haul his crops to town in less than one-third the time that he did with horses before—and at one-half the cost. And before long he'll be farming twice the acreage that he farmed previously because he has more time to devote to essential farm work, and can handle a bigger crop. His grandfather did the same thing when he discarded the old cradle-scythe and bought a reaper—he began farming 160 acres with this time-and-labor-saver where he farmed only ten or twenty acres before. They all fall sooner or later!

AND looking into the future a few years, when the farm airplane agent comes around to sell this "it-was-good-enough-for-grandad" farmer's son an air-wagon so that he can farm all the good land going to waste in roads, he'll hand the agent the same old story and tell him: "My dad used a motor truck and what was good enough for him is plenty good enough for me." And perhaps a year or so later he'll come sailing home with a shining new "airwagon." The next thing we know he'll be flying around up under the sky punching holes in the clouds with a pitchfork whenever he needs a little rain and delivering fresh eggs and cream from Saskatchewan to Montreal or Quebec every morning.

But that's getting just a little bit ahead of the game. We'll leave that for the next generation to deal with. Right now the motor truck is the coming idea with the farmer. It is not only an idea, but a practical reality. The main difficulty to overcome at the present time is the average farmer's lack of understanding of the value of the motor truck on the farm. He regards the truck as a luxury—something for the "gentleman farmer" of means, who farms merely for pleasure or as a hobby instead of farming as a business to make a living. But all progress is like that. Any new machine or innovation is regarded by the majority of the people as "luxuries" for the idle rich—until these same so-called "luxuries" come into general use and are brought within the reach of all. It was that way with the railroad, with the telephone, electric lights, and automobiles. It is that way with motor trucks in some parts of the country to-day. And the people who at first condemn these progress builders in the end often become warmest in their praise. They discover their practical value.

By the end of 1917, a total of 79,789 farmers in the States had discovered the practical value of the motor truck. They became so enthusiastic over this form of transportation once they got started, that they became the largest users of motor trucks, out-buying both the retail merchants and the manufacturers! That's the farmer for you—once you convince him a thing is all right he'll do the rest.

According to the *Daily Times* of Toronto there are only two countries in the world that have more automobiles than the Dominion—Great Britain and the United States; Canada has more railway mileage per capita than any country on the globe; Canada sells pulp and paper to the United States at the rate of $208,000 per working day. All of which shows that Canada with her population of 8,000,000 people is one of the most progressive and prosperous countries in the world. And, yet, the farmers of Canada are lagging behind in one important forward step of rural progress—motor truck transportation. They have not yet been convinced that the motor truck is more economical for hauling than horses.

THE U. S. Department of Agriculture wasn't convinced either until it made an extensive nation-wide investigation of the motor truck in farm use in the States to determine its proper economic value to the farmer. The following is a condensed summary of investigation of the motor truck in farm use in the October, 1918, Monthly Crop Report of the U. S. Department of Agriculture:

When the farmer has a motor truck even his cows can take a ride—to market.

The investigation showed that the average loads hauled by motor truck were: 58 bushels of corn, 84 bushels of wheat and 6.6 bales of cotton as compared to 39 bushels of corn, 56 bushels of wheat, and 3.6 bales of cotton hauling with wagons;

That the average cost per ton mile for the United States hauling with motor truck was: corn, 15 cents; wheat, 15 cents; and cotton, 18 cents, as compared to 33 cents per ton mile for hauling corn with wagons, 30 cents for wheat, and cotton 48 cents.

The report shows further that motor trucks averaged 3.4 round trips per day while wagons averaged only 1.2 round trips and motor trucks, in addition, covered more mileage, travelling an average distance of 11.3 miles as compared to 9 miles with horses and wagons.

This didn't particularly surprise the American farmers because 80,000 of them had already learned the little lesson in mathematics through personal experience. And they were not only using motor trucks for hauling their crops but also for hauling livestock. During 1918, hundreds of thousands of head of livestock were hauled to the principal packing house centres by motor truck. In a single day, 1,400 hogs, and 200 cattle and a great number of sheep were counted delivered by motor truck at St. Joseph, Mo. During the first eight months of 1918, a matter of 72,887 hogs were delivered by motor truck at Kansas City. Covering a period of nine months in 1918, a total of 142,220 hogs were delivered by farmers to the South Omaha stockyards by this progressive method of transportation, and during the year over a quarter of a million animals were brought in at this point by motor truck, coming from distances of up to 75 and 80 miles. Among other things, the farmers hauling livestock found that the shrinkage saved by motor truck transportation over other methods amounted to enough to practically pay for the cost of truck operation.

In hauling grain some of the Western wheat farmers have invested in motor trucks with automatic dump bodies so that unloading at the elevator is only the work of a moment.

IN many localities rural motor transportation lines have been established, motor trucks covering regular freight and express routes and serving all the farmers along the routes. In the State of Iowa there are almost two hundred motor trucks engaged in this comparatively recent enterprise. Now when the farmer has two or three cans of cream to ship to the city creamery, or a few dozen eggs to send to town, he doesn't hitch up the team and spend a day making the trip to town, but instead sends it in by the motor express—and if he needs a new pair of overalls or a bale of binder twine, the motor express driver is the obliging fellow who will look after it for him. This makes the farmer happy during his busy seasons when every minute counts and he can't spare any time away from the farm.

The motor truck idea is growing right along—and as it grows the farmers will become more prosperous and motor trucks on the farms more numerous. The immediate need in Canada, however, seems to be more diversified farming and the Government agriculturists are exerting every effort to bring this about. The motor truck is, of course, of greatest value to the diversified farmer because he has more to haul and his hauling covers a greater period so that the truck does not remain idle for any appreciable length of time.

Progressive dealers will find, in communities where conditions are right, that the motor truck presents excellent business possibilities. Live dealers with a good line of trucks are making nice profits from this source and find motor truck selling very satisfactory in every way. Dealers should find a ready market for motor trucks among tractor owners for they are already educated up to the power idea and the majority of them have need for a motor truck not only for hauling the increased production of their farms but also for hauling kerosene, gasoline, and oil for their tractors, as this alone entails considerable hauling. Dealers can also help to develop the sale of motor trucks to farmers by encouraging diversified farming which, as already stated, is the big need in the Dominion.

Novel Implement Side Line

Flour and feed as a side line has been successfully adopted by E. J. Foreman, implement dealer of Rivers, Manitoba. He had observed that other merchants in town were reluctant to handle this line despite the demand, and when he took over his present business a few months ago he talked with other business men in the town and they agreed to let him handle this trade exclusively. Since last November he has sold four carloads of flour and feed as well as four cars of hay. He could have sold three more cars of hay had he been able to get them.

Before Mr. Foreman took over this business it was split up among three other merchants, none of which could afford to buy in carload lots. Their supplies were hauled from Wheatland at a very considerable expense, and it was rather dirty work to handle bags of flour and feed.

This dealer is one of those who believe in sticking to one exclusive line, in this way he claims he is able to study the operation of his machinery, recommend it, instruct a farmer in its use and repair it intelligently.

Flour and feed is the unusual side line adopted by E. J. Foreman, an implement dealer at Rivers, Manitoba. This picture conveys an idea of the extensive stock he carries, and it will be observed from the sign that these commodities are sold to the public for spot cash.

Titan 10-20 Kerosene Tractor Has Been Reduced $225 in Price

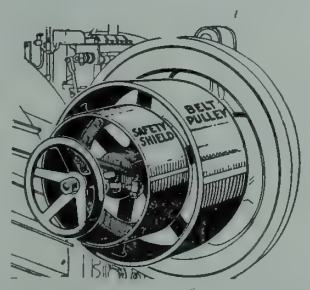
TITAN 10-20—the world's standard 10-20 kerosene tractor—has now been the talk of the farm power world for many months. In great numbers, in the United States and in the Dominion, it has been serving its owners well, building a secure reputation for drawbar and threshing and general belt work efficiency.

Among all tractors, Titan 10-20 is probably least in need of selling effort. It is selling itself on its record, yet it is important for every Titan agent and every farmer that Titan 10-20 meet with still wider distribution. Because of Titan popularity in the past, Titan factory capacity has been greatly increased and this has made possible the recent $225 cut in price, dating from July 8, 1919. Farmers throughout the Dominion have been told of this great reduction, in double pages and full pages in the farm papers.

The new low price ($1,100 cash, f.o.b. Winnipeg, and corresponding reductions throughout Canada) will bring many new buyers to Titan agents. It is an unusual opportunity for men who sell Titan 10-20 tractors. For any information on Titan 10-20 or on International 15-30, see the blockman or write to the nearest branch house.

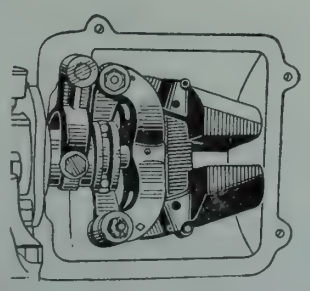
Here are great factors that have made Titan 10-20 so popular with farmer and therefore with agent. When you sell Titan, these features are included in the original price. They are given below in the words we have used in presenting them to the farmers.

Friction Clutch Pulley



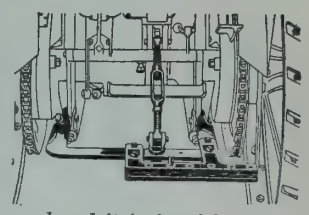
A large, wide friction clutch pulley, made in five sizes, equipped with safety shield, is mounted directly on the crank-shaft of the low-speed, steady Titan engine and delivers the full power to the driven machine. It has an 8½-inch face and 20-inch diameter. *Titan owners will tell you here is remarkably steady threshing power.* The Titan 10-20 can be quickly backed into the belt because of the location of the pulley and the belt clears the front wheels and other parts of the tractor by a generous margin. It is not necessary to dig holes for the front wheels to get belt clearance. The Titan pulley was *not* put on as an *after thought.* The designers did *not* overlook it in the first place. *Some* tractor builders committed this very serious error, due to lack of farm knowledge and experience. To remedy this error, they designed a small make-shift pulley, in one size only, attached it in an awkward place and charge you $35 to $40 for it. *The Titan 10-20 friction clutch pulley is furnished without extra charge.*

Throttle Governor



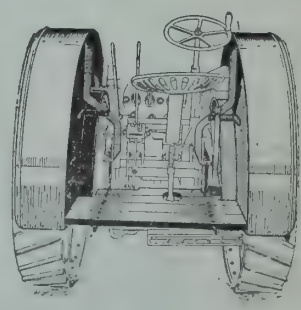
Some tractors are sold without governors because, perhaps, the designers did not know that one was needed. Which is the best economy—to pay an operator a salary just to sit on the tractor and adjust the fuel to the load variations when engaged in belt work or let a throttle governor do it without extra cost?—do it automatically, perfectly. The Titan throttle governor *saves fuel, prevents grain losses by delivering uniform power to your thresher* and lengthens the life of both tractor and driven machines. *You get this governor without extra charge.*

Drawbar



Some tractor builders put a *hook and eye affair* on the tail end of their tractors—and call it a drawbar! They seem to have overlooked the fact that a farm tractor not only pulls plows, but also mowers, hay loaders, grain binders, etc., each requiring different hitch adjustment. *Perhaps they didn't know about these other machines.* Look at the Titan drawbar. Note the provisions for a wide range of adjustment both up and down and sidewise. *The Titan drawbar fits every need and it is furnished without extra cost.*

Fenders



The designers of some tractors evidently did not know that the drive wheels throw dirt, dust or mud over the operator and machine unless fenders prevent it. The Titan 10-20 has such fenders. They are also a "safety-first" feature. In some farming sections laws have been passed prohibiting the sale of fenderless tractors. *Titan fenders are furnished without the $40 to $50 extra charge made by the "low price" manufacturers.*

Tools

A complete set of sixteen tools is furnished with every Titant 10-20. This handy tool-kit is provided in spite of the fact that Titan 10-20 tractors get out of order less frequently than the general run of tractors. Some tractor concerns whose tractors really need frequent adjustment and repairs, furnish nothing but two or three wrenches. They tell you that their product is *so good* that it doesnt' need adjustment. Do you believe this? As a matter of fact, they omit necessary tools for the same reason they omit the essential features described above—to make a low "camouflage price"! *The Titan 10-20 complete tool kit is furnished without extra charge.*

INTERNATIONAL HARVESTER COMPANY

OF CANADA LTD.

WESTERN BRANCHES — BRANDON, WINNIPEG, MAN., CALGARY, EDMONTON, LETHBRIDGE, ALTA., ESTEVAN, N. BATTLEFORD, REGINA, SASKATOON, YORKTON, SASK.

EASTERN BRANCHES — HAMILTON, LONDON, OTTAWA, ONT., MONTREAL, QUEBEC, QUE., ST JOHN, N. B.

How Do You Dope Out Your Business?

DO you know what is your busiest month, and which one of the twelve is the dullest? Do you know it actually, with the figures in black and white before you, or do you carry the idea in your head, merely as an impression and as you remember it, that, at a certain time of the year, your sales hit the peak and that, at some other time, they drop off to the lowest level, asks a writer in *Motor World*.

The keen business man, who seeks every possible means of bettering his yearly returns, can tell to the fraction of a per cent. the totals for each month of the year. He has been forced to this because of the necessities of planning his business, of ordering his stocks, of preparing his sales campaigns, of doping out his advertising and his window displays, and of trying to force up the dropping curve of sales as the minimum months come around.

Every automobile, implement, tractor and accessory dealer should have his charts so made that he can tell how much business was transacted each month in each of the following departments:

1. New car sales.
2. Used car sales.
3. Truck sales.
4. Accessory sales.
5. Tire sales.
6. Repair work.

MANY firms already have worked out these tables on an elaborate scale and can forecast for months in advance, because of their completeness of their figures, the business to be expected of any particular period. Factories, jobbers and large distributors particularly have set the pace in this respect, but hundreds of smaller dealers and repair shops have not considered the smaller figures of their own trade as meriting such a close scrutiny. No business is so small that this "dope sheet" is unnecessary.

Actually, it is simple to prepare the required charts, provided the proper methods of accounting are used in bookkeeping department. Take the total business in each of the suggested lines for the year; then find out how much of it was done in each of the twelve months. It is easy to balance one against another and see which is the maximum and which the minimum, with the ups and downs of the curve between them. If you have never done this before, then do so for several years back—the more the better—and form a composite chart, averaging the twelve month periods, so that a balance is struck, thus eliminating chance of fluctuations due to local or unusual conditions of short duration.

The chart shown here is taken from the Tire Rate Book, published by the company that issues *Motor World*, giving the fluctuation curve of tire distribution, prepared from figures furnished by three representative tire factories. It is reproduced as a model upon which other charts may be based and illustrates the manner in which they may be prepared, The percentage by month follows:

	Per Cent.
January	9.8
February	8.3
March	10.2
April	8.3
May	9.8
June	10.1
July	10.5
August	9.6
September	7.2
October	6.4
November	4.8
December	4.8

PROBABLY you already knew that the months of November and December were the slack months of the year in the tire business. But did you know the difference in actual amounts so that you could intelligently prepare your advance orders and lay out whatever advertising plans you may make?

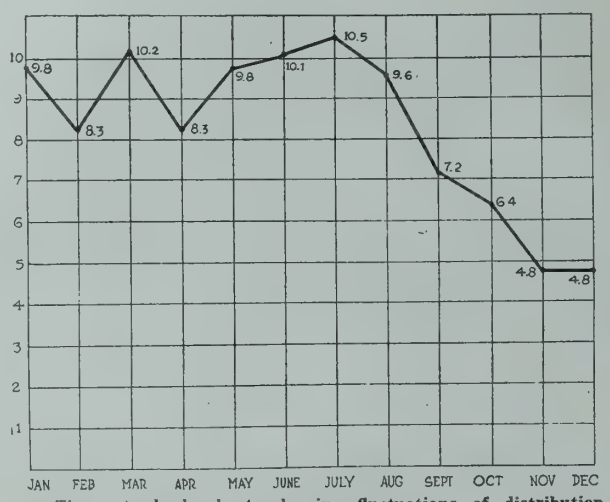
The chart would indicate, upon study, that stocks are allowed to decrease in time for the annual end of December inventories and then in January are rebuilt for expected later business. Or the larger sales in the first month may be due to winter driving, tires needing replacement after the bad weather conditions of the earlier cold months. Perhaps the January figure given here is not indicative of your own individual business, but do you know that it is not?

Then comes March, with its totals the second largest of the year. What does that mean in an analysis of your business? Is it that cars are being taken out of winter storage and prepared for the spring and summer driving? Tires must be changed so that those worn out in the late fall and left on during the winter may be replaced possibly, is the answer. Anyhow, indicating that some such demand may be expected about that time gives the dealer an opportunity to prepare for such trade.

IF his business has shown those curves, why should he not in February begin his form letters and his newspaper advertising to draw in this demand to his salesroom? Knowing beforehand that March will show a big demand, if such be the facts in the individual business, plans may be made beforehand to capture the dollars flowing about. This should suggest many business-getters for the man who seeks to increase his profits and who is willing to use his brain in going after it.

Better selling methods to-day, for the retailer and particularly the man with the smaller capital, require quick and frequent turn-overs of the invested capital. With a chart showing actual trade, the ordering of stock should be simplified with the time of holding it on the shelves decreased. Certain volumes are shown for stated periods—purchases should be made in conformity with those demands and not greater or less. And they may be planned beforehand, with reasonable certainty that no mistakes will be made.

The best method of advertising to-day call for it during the slack times, when business does not have to be forced. Does not the chart show when such trade pullers can best be utilized to overcome the stag-



Tire rate book chart, showing fluctuations of distribution throughout year.

nation of the lower periods? Advertising campaigns, which, of course, include window displays, can thus be arranged in advance and the chart, as later made up, will show whether or not they have been worthwhile.

Analysis of your work offers many opportunities, chief of which is that experience of past years points the way of the future.

Every line should thus be looked into and a study of it made. There are countless things that it should reveal and, with thought, point out the means of correction. To be fore-warned is to be fore-armed and affords the chance of advance preparation.

GET the figures for as many parts of your business as you can. If you can make it more detailed than is suggested here, do not fail to do so. Many obscure causes, pointing the way to greater turnovers and quicker profits, will become clear to you and you will be enabled to take the better advantage of their recurrence. You will see many things previously hidden and many new pointers and ideas should come to you.

Take the charts and the figures at your desk or table. Think them over, balance one against another, and with your experience and knowledge of both local and general conditions, "dope" cut just what have been the reasons for the fluctuations from month to month. Then study them and decide what can be done to change them and make them higher, with the totals greater in the maximum months and the minimum less far away from the peaks.

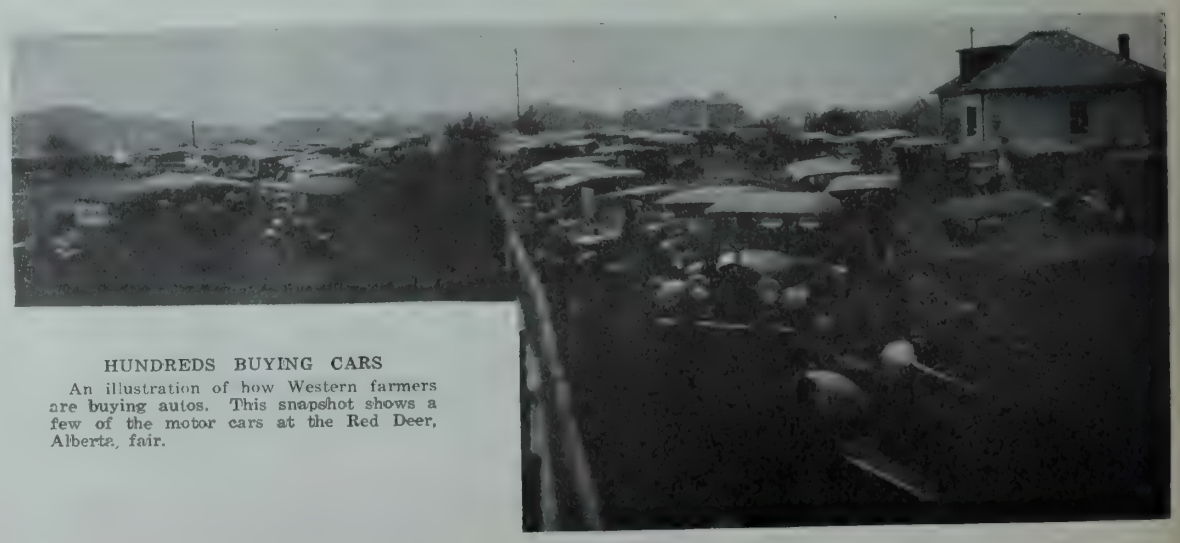
Do this without delay and think hard over the results you obtain. But do not believe that the mere preparation of the chart will bring about any of the desired results. The chart will only point out means by which your own industry and intelligence may bring about better business and greater profits.

SOME NEW FORD REPAIR SCHEDULES

A NEW schedule covering cost of labor on repair work at its branches and agencies has just been issued for 1919-20 by the Ford Motor Co. Distributors and dealers are not required to adhere strictly to this price list, but it is compiled to aid them in determining upon a reasonable charge for their efforts. This list of charges will be of interest to other dealers, in addition to the Ford men.

The most important revision is for the engine division, on parts brought in or shipped in for repairs. This list follows:

	New Price	Old Price
55B—Overhaul motor and transmission,	$15.75	$17.00
56B—Overhaul motor only	11.00	12.00
57B—Overhaul transmission only	4.00	4.75
58B—Rebore cylinder only	1.50	1.75
59B—Rebore cylinder only including fitting of pistons	2.55	2.75
60B—Rebore and rebabbitt cylinder including fitting of pistons	3.75	4.50
61B—Rebabbitt cylinder only	1.50	1.75
62B—Rebabbitt cylinder, fit crankshaft and run-in	2.25	2.75
63B—Rebore and rebabbitt cylinder including fitting of pistons, crankshaft, connecting rod and running in	5.00	6.00
64B—Rebore and rebabbitt cylinder, fit pistons, valves, push rods, camshaft, crankshaft, connecting rods and run-in	7.50	9.00
65B—Rebore and fit pistons and valves,	2.75	3.25
66B—Rebore and fit pistons, valves and push rods, and straighten and fit camshaft	3.50	4.25
67B—Fit pistons, crankshaft and run-in (rebored block)	1.25	1.50
68B—Rebush three transmission drums,	1.50	1.50
69B—Rebush transmission drums—each	.60	.60
70B—Rebush and re-rivet three triple gear assemblies	1.25	1.50
71B—Braze crankcase, arms and support	3.00	2.50
72B—Repair crankcase, drain plug housing	2.00	2.50
73B—Overhaul or repair carbureter	1.00	1.25
74B—Disassemble, 5/8 in., 9/16 in. or 3/4 in. magnets for flywheel and install new set	.60	.60
75B—Straighten crankshaft	1.00	1.25
76B—Straighten camshaft	.60	.60
77B—Straighten camshaft and fit bearings	1.00	1.25
Operations 71B and 72B combined on one order	3.00	3.75



HUNDREDS BUYING CARS

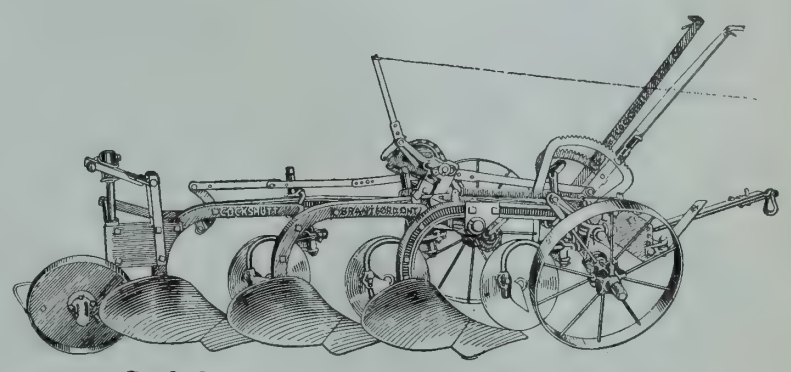
An illustration of how Western farmers are buying autos. This snapshot shows a few of the motor cars at the Red Deer, Alberta, fair.

The COCKSHUTT LINE

Is the Quickest "Line" to Success in the Implement Business

Proven Value--Nothing Experimental

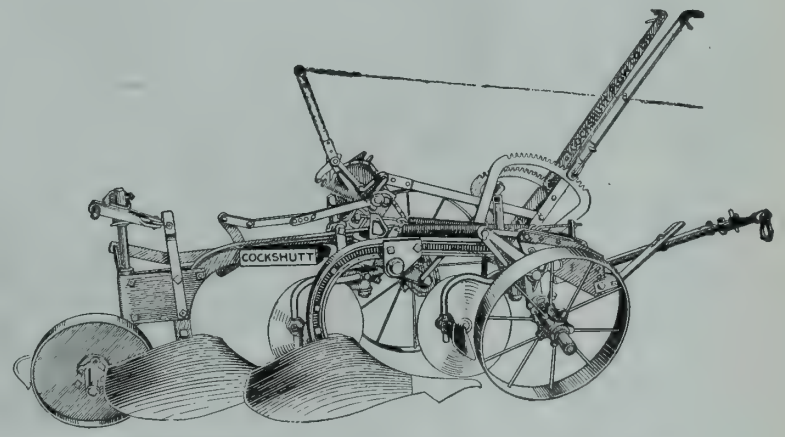
Before we place a new Cockshutt Implement on sale we give it the most gruelling tests, extending over many months perhaps, in actual field use, under the searching eyes of our own experts, whose business it is to *make that implement fall down if they can.* It gets rougher, harder use than any farmer will ever give it, and only after it passes every test for design, materials, workmanship, light draft and value in the field, is it allowed to go out under our name. That policy has built up the Cockshutt reputation.



Cockshutt 3-Furrow Light Tractor Plow

Dealer Support--Heavy and Steady

The Cockshutt Dealer Policy is to do nothing by halves. Once a dealer is included in the Cockshutt organization we are always behind him with splendid catalogues, folders, hangers and steady, seasonable advertising in the leading farm publications.



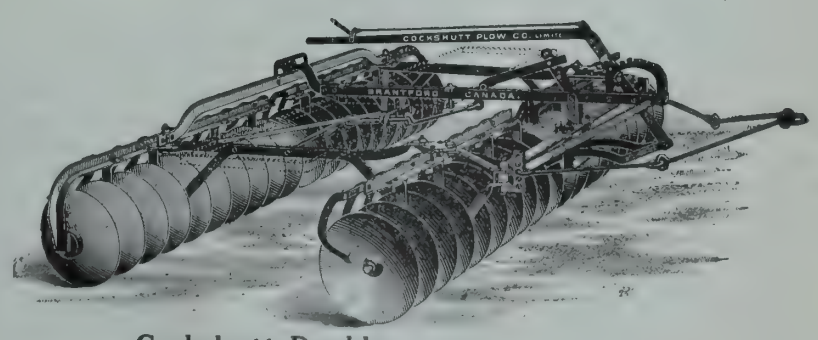
Cockshutt 2-Furrow Light Tractor Plow

Cockshutt Light Tractor Plow

These Plows are by long odds the most popular for Light Tractor work. They are light in draft, easily controlled from the Tractor driver's seat and have the strength and up-to-date Cockshutt design to fit them for splendid plowing in any soil. Built in 2-furrow and 3-furrow sizes—with either wide or narrow bottoms, and fitted with combined Rolling Colters and Jointers.

Cockshutt Double Disc Harrow

The cleanest working Disc Harrow proposition you can sell. It does a lot of discing and its light draft, through efficient ball bearings and disc-scrapers, permits it to be readily used with a light tractor. Front sections are out-throw, back sections are in-throw, ensuring thorough work. Square axles ensure positive working of the discs. We also furnish a lighter harrow—a combination of our No. 1 and No. 4.



Cockshutt Double-

Write us today for Cockshutt Dealer Proposition and our complete Catalogues showing our big line.

Cockshutt Plow Co.
Limited
BRANTFORD, ONTARIO

Sold in Eastern Ontario, Quebec and Maritime Provinces by

The Frost & Wood Co.
Limited
Montreal, SMITH'S FALLS, St. John.

Give the Tractor a Fair Hearing

By F. H. SWEET

THE tractor is too often condemned without weighing its efforts in comparison with the efforts of the automobile that we hold up as a mark to shoot at. When correct comparisons are made the tractor does not suffer.

Every day of our lives we meet automobiles of all kinds and descriptions, limping along with one or more cylinders missing. We smile to ourselves, or remark to our companion that "He is hittin' on two." No serious trouble, of course; one of a hundred and one things may be causing it, and nothing is thought of it.

Mister Farmer, or whoever is driving it, drives up to the first garage or service station that he comes to and asks the man wearing the greasy overalls to "Look 'er over, Bud, she's been missin' all the way in."

In an hour or so the owner returns and is told that a couple of spark plugs had gone bad and had to be replaced. He is also told that the valves need grinding and that he really ought to put in some new piston rings, as it doesn't seem to have much compression. Maybe the carburetor needs doctoring. Mister Farmer pays his bill of three dollars and drives away. He does not feel that the car was in any way to blame for the spark plugs going wrong. Those things happen every day, and to every make of car, and are, no doubt, due to poor oil or gas, or both. Repair shops and garages are full to overflowing, all over the country, with just such cases. Nothing wrong; no trouble, of course; just having them tuned up a little.

NOW let us see what happens to the tractor when one cylinder misses. It cannot limp along to a service station. It isn't even headed toward one. It isn't rolling along on a pneumatic tire, but its heavy wheels sink in and the soft earth clings to them. It is loaded to capacity, and when one cylinder stops firing the tractor stops going and the neighbors who drive by point to it and remark that "Smith's tractor is blowed up again." The car that they are riding in at the very moment they make such remarks may be full of carbon, have loose connecting-rod bearings, or missing on two cylinders, and still they feel that their car is a success and that Smith's tractor is a failure because one spark plug is out of commission. They drive along to town and have their car "tuned up" while they do some shopping or go to a picture show, and Smith's tractor stands still in the field, unable to move.

The injustice of their comparison is obvious, and would be made only because of lack of understanding

This lack of understanding is, however, much too prevalent among the very people who should profit most by a practical working knowledge of the care and capacity, as well as the limitations, of high-powered machinery.

Again, Mister Farmer's car develops a little motor knock. Nothing serious happens and he lets it run along till he can spare time to leave it with the repair man. A little knock is annoying, but it is doing no particular harm and it can wait. When he drives into the shop and tells "George" to take up the bearings, it may be that a lot of little things need adjusting, and when Mister Farmer's attention is called to them he says they may as well "give 'er a good overhaulin' while she's down." If, when he goes to get his car, he has a bill of twenty-five to seventy-five dollars he doesn't complain, but marvels at the wonderful success of his automobile that has "run over 8,000 miles, and this is the first time the motor has been taken down."

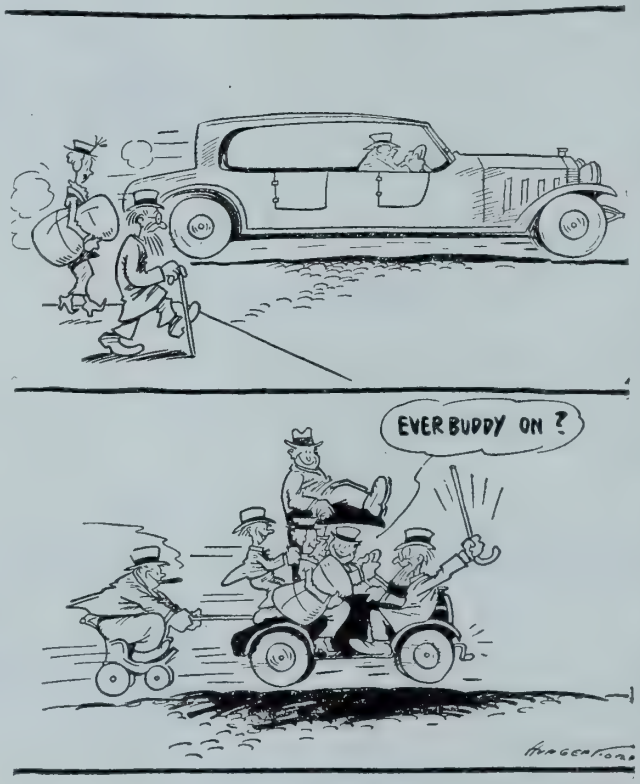
Now what would have been the result of this sort of treatment if given to a tractor? When the tractor motor develops a knock it cannot be ignored. It is absolutely imperative that it be looked after, and at once. For a tractor is laboring under so terrific a strain that a knock whose warning is unheeded will very soon result in a break, and actually one that is very expensive. There is no garage close by to drive the tractor into, and the driver does not know what is causing the knock, nor how to remedy it. He doesn't know how serious may be the damage resulting from his carelessness or lack of understanding and so it is usually allowed to run along until something comes loose. If that something happens to be a connecting-rod, a crank case or perhaps a motor block is destroyed before the motor can be stopped.

ONE of the points that is so generally overlooked is the fact that the automobile ordinarily rolls along using only a small fraction of its power, while the tractor is struggling with a load that is a dead drag, and requires seventy-five to one hundred per cent. of its power from morning till night.

For example: If you would take any one of a dozen of the better makes of cars on the market and start it up the road with the throttle wide open, it would soon reach a speed of seventy-five miles an hour. In fact, there are very few of the larger cars that are not capable of making sixty miles or more, and in doing this their motors are not working any harder than the tractor motor works when pulling its normal load.

In other words, the tractor motor that goes out and pulls its load for ten hours has put forth as much energy as the automobile that has covered a distance of 600 to 750 miles. Pretty good day's run, isn't it?

It is nothing uncommon for a farmer to buy a tractor, take it home and start right in plowing and plow day and night for thirty or forty days. A tractor that would not stand up for thirty days would be considered a poor excuse indeed. The farmer expects his tractor to do this, and would make a vigorous protest if it failed to deliver the goods. He does not stop to consider that if he would start out with a new car and



Hungerford, in Pittsburgh "Sun"

A Study in Human Kindness.

drive it night and day for thirty days at full speed he would cover over 40,000 miles. Yet this is true—that is, it would be true if the car kept on going.

Not so very long ago a man came to a friend for the sole purpose of getting into an argument. He was going to prove that tractors are a failure as compared with automobiles.

"I have had my car two years and I have driven it right at 8,000 miles, and all it has cost me for repairs is twenty-eight dollars. Jones has just had his tractor a little over a year and he told me he has paid out $122 for repairs," is the way he put it up.

ON the face of it, it did look bad, but my friend asked him:

"How many plows does Jones pull?"

"Three." he replied.

"Has he plenty of reserve power?"

"No, he can hardly pull three."

"How fast will your car run?"

"I've had her up to sixty," answered the man.

"Then," said my friend, "your car could have traveled the 8,000 miles in 133 hours without working the motor any harder than Jones' tractor motor has to work to pull three plows—that is, your car can run sixty miles an hour just as easy as Jones' tractor can pull three plows?"

"Sure she can," was his comeback.

By figuring up the amount of work that Jones had done with his tractor during the two seasons he had owned it, they agreed that his tractor had put in at least 800 hours, either in the field or on the belt. By the use of a pencil and a scrap of paper they soon figured out that it had cost Jone fifteen cents an hour to run his tractor—that is, for repairs.

It was also found that the repairs for the automobile, if he had run at full speed as had the tractor and covered its 8,000 miles in 133 hours, would have been something like twenty-one cents an hour. The "man who wanted an argument" had never thought of making this sort of comparison, but he saw how unfair had been his own thoughtless and hasty deductions, and he who came to scoff remained to buy, and is now one of the most enthusiastic tractor boosters it is my pleasure to know.

Then we are asked, "Why isn't the tractor provided with more reserve power?" The man asking the question always overlooks the fact that he can give his tractor surplus power by taking off part of his load, and by no other means. The trouble is that a man will load his tractor to capacity, and then put up a yell because it hasn't any surplus power. If he hitched his automobile to a load that required every bit of its pull, would there be any reserve power?" I asked this man a few days ago.

"But," he sputtered indignantly, "an automobile isn't intended to be used that way."

"Right you are," I agreed, "and neither is a tractor."

WHEN a tractor is built to deliver a certain horse power, it has just so much power and no more. there is no magic process by which it can draw unlimited power from the atmosphere any time it may need it to satisfy the unreasonable demands made upon it. Yet this impression seems somehow to have got abroad. Overloading has stopped many a tractor in the field in the midst of the busy harvest time. The person with the greasy overalls and the magic touch is miles away. The flivver that failed is tucked away out of sight in some repair shop. But the tractor that missed a shot is standing in plain sight of all who pass that field.

"That tractor is a failure," says the wise guy driving by; "I wonder why they can't make a tractor that will stand up like an automobile?"

Before the days of the automobile or tractor, the driving horse and the top buggy were the prepared pets of nearly every well-regulated farm. The driving horse wore the celluloid rings and other horses jewelry; and for the buggy was provided a nice clean shed; the work horse wore whip marks and the farm wagon stood out in the weather.

There is a marked similarity in the treatment accorded the automobile and the tractor. For the auto a new garage is provided, while the tractor has to weather whatever storms happen to be on the calendar.

The ease with which a car can be taken to a doctor and have its every little ache removed also accounts for the seeming reliability of the auto as compared with the tractor, and until such time as the tractor farmer will equip himself in such a way that he can minister to the wants of his machine, it will continue to suffer in comparison.

Tractor are by no means perfect, but remarkable progress has been made during the past three or four years, and the time has arrived when a farmer can buy an honestly constructed machine and know positively that it will do the work for which it was built, and do it well and economically if properly handled.

THE tractor is not a mysterious creature that only the favored few can fathom, but a very simple mechanical mule, far more reliable than old Maud. True, the tractor has a few vital spots that must be in perfect condition; it must have a hot spark in each and every cylinder, good compression and all bearings kept tight; but it requires neither a Philadelphia lawyer nor a master mechanic to see that these things are kept in that condition.

A small supply of common ordinary tractor sense mixed fifty-fifty with careful handling makes tractors a success, a profitable investment, instead of an expensive experiment. Treat 'em square and they'll do the same by you.

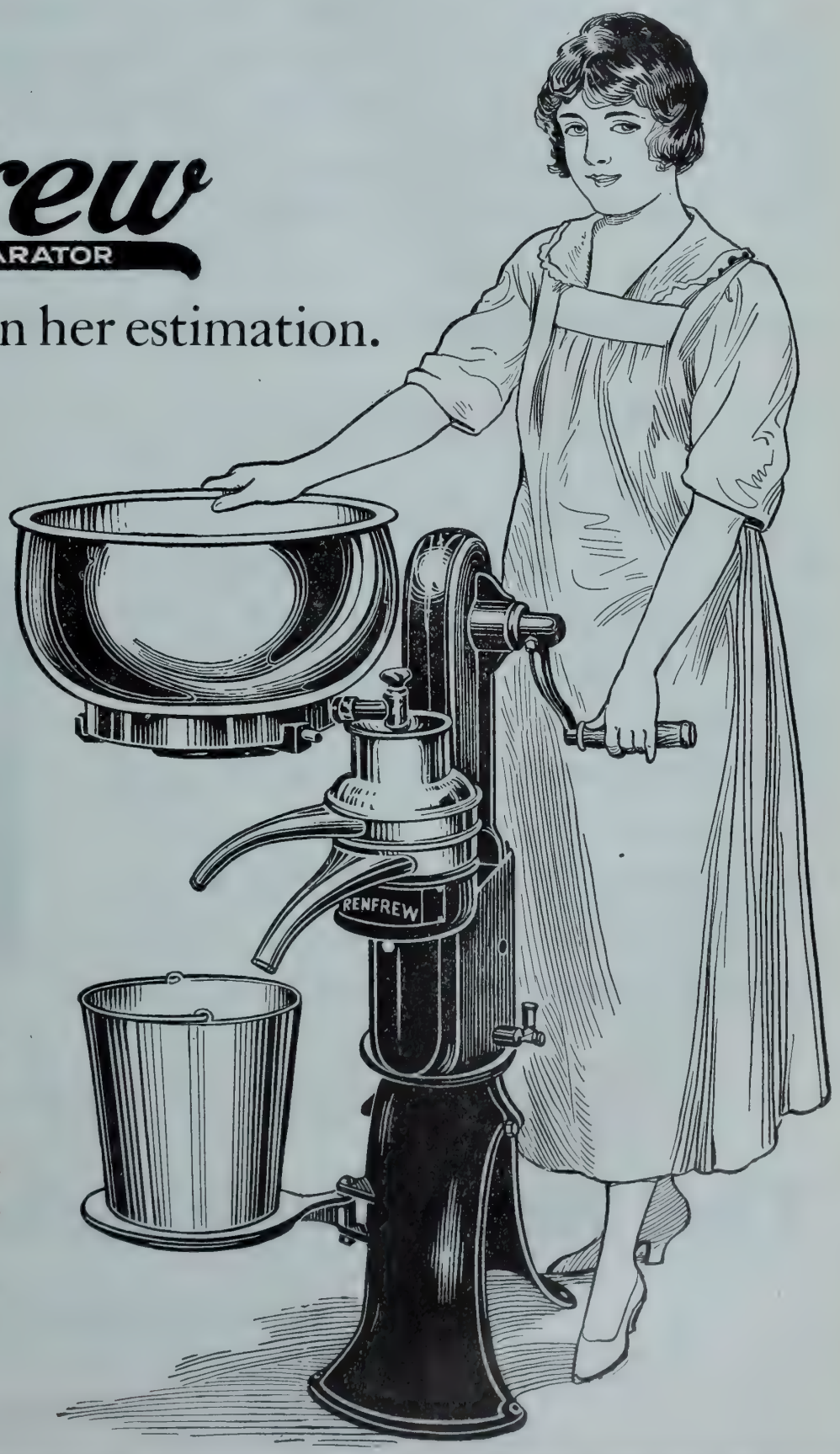
The Women's Preference

The housewife's opinion usually has a great deal of weight when a new separator is being purchased and her ideals of what it should be are all summed up in the Renfrew.

The easy cleaning, the low supply tank, the wide open bowl, the self-oiling system, the easy running, and the durability of the

Renfrew
CREAM SEPARATOR

are worth while features in her estimation.



But the strongest selling point which concerns both farmer and wife is the ability of the Renfrew to skim close—it actually gets 99.99% of the Butter-Fat, proven by Government tests. This means bigger profits.

Then, too, when the farmer wants to increase his herd the Renfrew's exclusive interchangeable capacity feature gives the full and complete advantage of a new machine by simply changing the bowl and fittings. All he has to do is order a bowl of the size he needs — 450, 650, 800 or 1,000 lbs.—with attachments; we make an allowance for return to us of his smaller equipment so that the cost of making this change is very little.

Let us send you our Agency Proposition.
Write for full particulars and catalogue.

The Renfrew Machinery Co.
LIMITED

Head Office and Works
Renfrew - Ontario

Happy Farmer Mean

THAT is why the Happy Farmer leaves all competition behind in clinching easy sales for the dealer.

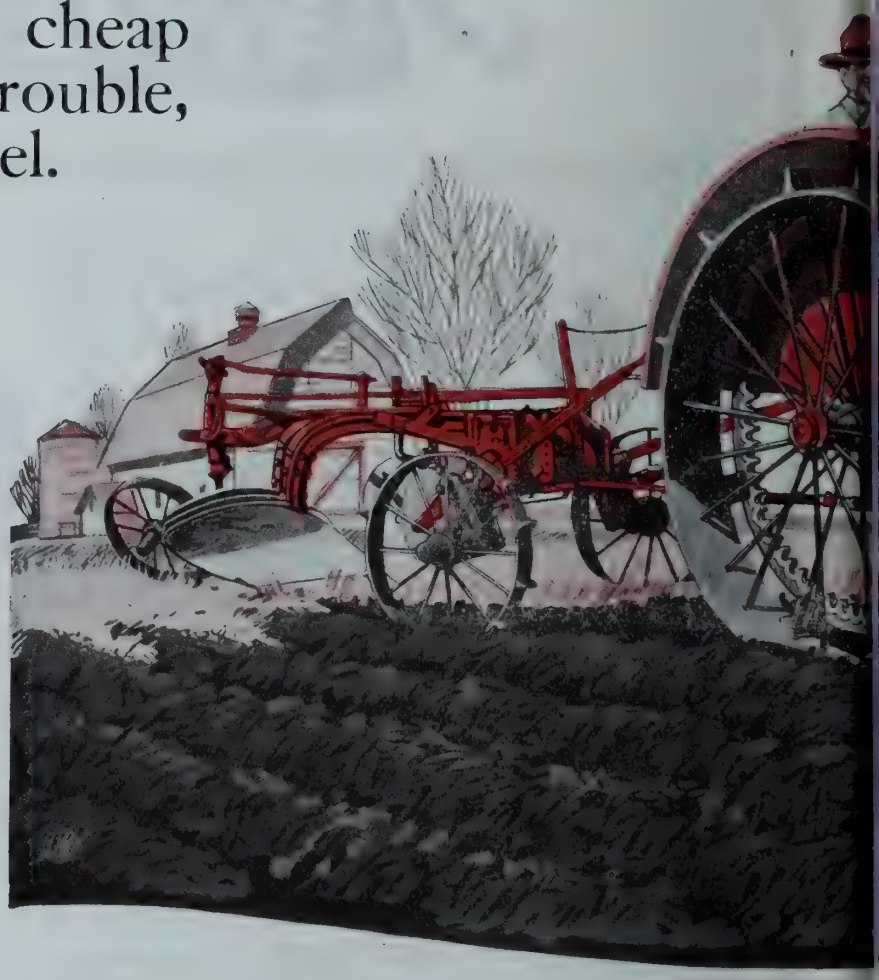
Real Kerosene Engine

The Happy Farmer has a real kerosene motor with a special short intake. By delivering perfectly vaporized fuel hot to the combustion chambers it gets the last ounce of power out of cheap coal oil. There is no carbon trouble, no smoke nuisance, no wasted fuel.

Remarkable Power

The happy Farmer has remarkable power compared with its light weight (only 3,700 lbs.) It gets no less than 2,000 lbs. draw bar pull because it has so little initial weight of its own to propel along. Besides there is little waste of power between engine and final drive. It is heavy enough to do the hard-

Happy
TRA



If your territory has not already been snapped up by enterprising dea

The Renfrew Machinery Company,

Agencies almost everywhere in Canada

Other Lines: Renfrew Cream Separator---Renfre

Tractor Satisfaction

est plowing --- the big test --- yet light enough not to pack the ground.

'armer
TOR

Plows to the Fences

Happy Farmer plows to the fences; no unplowed corners to finish with the team: no fussing with the binder at corners. It turns in its tracks (one-wheel pivots) goes anywhere a team can go with more and quicker power always.

The Simplest of all Tractors

The Happy Farmer is the simplest of all Tractors. It is as easy to run as an automobile. It is the least liable to get out of order. It does its work.

No other dealer can offer as much in the way of practical design, effective performance and economy as the Happy Farmer Man.

Its design is the product of years of experience and practical skill of famous engineers. Certainly it is worth any man's while to sift the advantages of this up-to-the-minute tractor and act promptly.

---lose no time. Write for attractive selling proposition without delay

mited, Head Office and Works, **Renfrew, Ontario**

Eastern Branch, Sussex, N.B.

Kerosene Engine---Farmer's 2000-lb. Truck Scale

Dealers Are Delighted

They are getting real worth while profits in selling the Renfrew Handy Truck Scale.

A farmer often loses enough on one single sale of cattle, hogs or sheep, to pay for this scale, so it is easy to convince him that the

Above is the photograph of a cheque we paid one of our agents for one month's commission for selling Renfrew Truck Scales. The commission paid to this agent for July was $1,114.91.

Below is one of the many letters of appreciation we receive from satisfied dealers.

Combermere, June 17, 1919.

Renfrew Machinery Co., Ltd.,
Renfrew, Ont.
Dear Sirs:—

Received your letter and cheque last night and many thanks for same and there is one thing I can say: I have been agent for many companies and the Renfrew is the best of all, and I hope that I will be able to put through many more sales this summer and have some still larger cheques than this one come to me.

I remain,

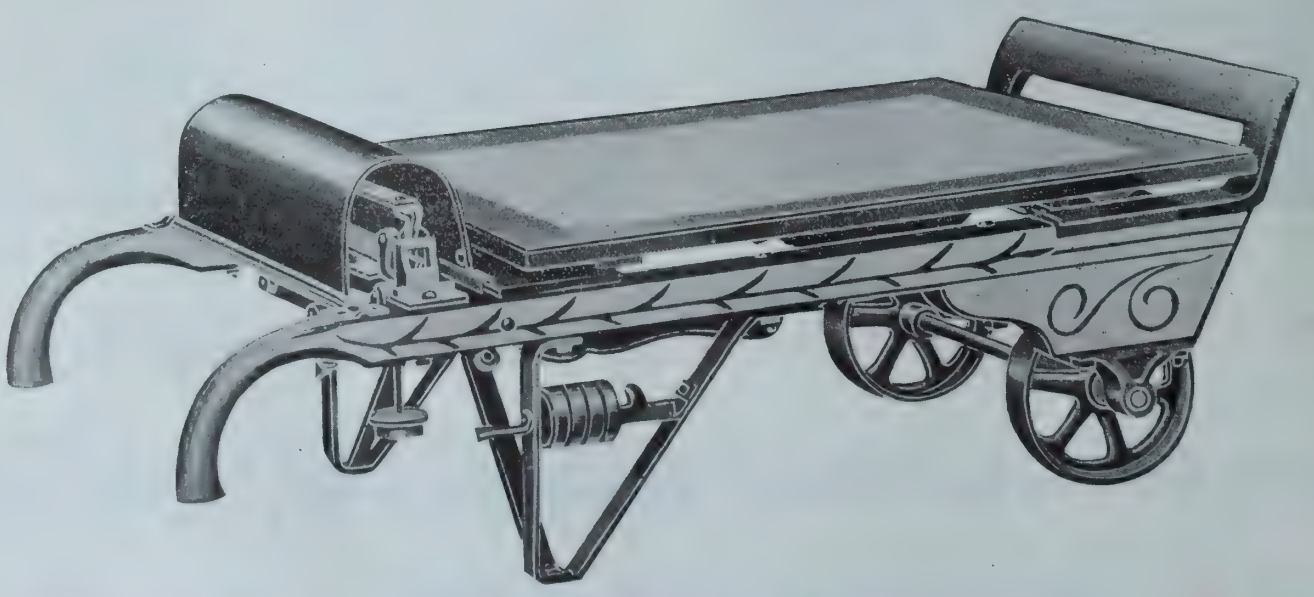
Oswald R Guillet

Renfrew Handy Truck Scale

is going to prove a money-saver. The Renfrew weighs anything from one pound to 2,000 pounds, and there is no doubt of its accuracy, for the Government Certificate of correct weight accompanies every scale.

It is simple in construction and can be wheeled around as easily as an ordinary truck. There is no need to lift heavy loads; simply truck the scale to whatever you want to weigh, slip the scale underneath and the heavy load is weighed.

The Renfrew is self-adjusting and weighs correctly on uneven ground. When not in use it can be stood up against the wall, out of everyone's way.



The Renfrew Machinery Company, Limited

Head Office and Works: RENFREW, ONT. Eastern Branch: Sussex, N. B.

SHOP NOTES FOR THE GARAGE MAN

Management and Layout—Pressure Table—Speedometer Vibration—Gear Tooth Hardening

Repair Shop Management and Layout

Conducted by SCOTT T. DUTHIE

WHY should not the small one or two-man workshop be run as efficiently as the large establishment? It can be done, and without any extra expense in most cases. The secret lies in making a plan of shop routine, being sure it is right and then putting it into force. By this, I do not mean BY FORCE which, in turn, generally means PRINTED NOTICES stuck up all over the place.

In the small shop the owner is generally close enough to his men to discuss ways and means for putting the work through in the best way, and they are only too willing to help to this end when it is TALKED over with them. Nothing "riles" the average workman like having notices forbidding this and that stuck up in front of him; "ask" him to do the same thing and he will do it every time; try to force it on him and he will try and dodge doing it every time. I know this is true for I have experienced it myself and so have fellows I have worked along with.

In the very first place impress on the "boys" that you would like to see the shop kept clean and tidy; get them to take a pride in the place, and when a customer remarks on the improvement don't forget to tell them. Then they will feel that their efforts are worth while and they will strive to live up to the reputation they are getting for having a clean, tidy shop. As time goes on and people remark how different your shop looks from the average repair shop, they will be compelled to keep it in that shape in order to live up to the reputation they gain; thus it becomes quite easy to maintain a clean shop.

EVERY night at least the place should be swept out and all benches cleared of tools and parts so that in the morning a clear start can be made.

Coming to the question of tools, these should be kept in shallow drawers under the bench, where they are handy and yet out of the reach of anyone happening along. Tools these days are too expensive to lend around to the neighbors, and they are not likely to ask for them, unless they need them very badly, if they are not too accessible.

The various machines should be kept in good order, that is to say, ready to do their share of any job that comes along. If a belt is broken it should be a rule that the man who is operating it when the break occurs is the man to mend it, and it should be done before he proceeds further, even though he does not need it again for that particular job. It broke on his job and the time repairing it should in all fairness be charged up to that one.

Most shops have a power drill and it is a good plan to have a small emery wheel close at hand to sharpen drills, for many a man struggles along with a dull tool just because it is too far to go across that shop to the grinder. A small, high-speed wheel close to the drill would be a good investment in any shop.

Most shops, when "belting up," appear to take any old width of belt they can get hold of. This is poor economy, for if you have a fair over-size margin on your belt widths you will have very little trouble from breakages, and the time saved will more than repay the little extra initial cost. It should also be a rule that all leather belts receive a good dressing of Neatsfoot oil before they are used at all. I always give them as much as ever they will soak up and they are then good for a couple of years or so. They throw off any excess in the first few minutes of operation.

ANOTHER very useful thing in a workshop is a barrel, sawn in half, and containing about ten gallons of *coal oil.* This cuts out the danger of fire to a great extent, for it does not throw off the fumes that gasoline does, and, besides, it is far cheaper than having about half a gallon of gasoline in a small pail and throwing it away after every job. The dirt settles to the bottom over night in the coal oil and when it gets too high the coal oil can be taken off the top and the tub cleaned out; in the average shop this will only require doing about once a month. Dirty pieces off machines can be left to soak overnight and lifted out clean in the morning. This is a good help when engines are handled for repair work.

A good set of wire brushes will be found useful for this work and could be made to fit in sockets on the tubs that they would always be where they were wanted and when they were wanted.

The average pit is a firetrap in the usual run of shops for this reason. The gasoline drip forms fumes which settle to the lowest point which, as a rule, is the pit. An engine is started and may back-fire; a spark drops into the pit and sometimes ignites these fumes; or an electric trouble light may be broken and the flash from this will cause a fire.

When building a pit why not put a flue from the BOTTOM and the natural draught will draw all the fumes out, making it safe and at a very little extra cost as this can be turned into an existing chimney or a separate pipe run out for it? It is money well spent and you will be well repaid by reduced fire risk if you do it. Of course every pit should be wired to give electric light, for "trouble light" wires running across the floor from some outside socket are a source of great danger.

Also why not make the pit complete by installing a narrow shelf for small parts taken off the car and also a wall vice so the men can file down any small part without climbing out to the regular work bench? These are all time and temper-savers and well worth installing. The pit, of course, should have a drain to keep it dry and, if it is cement, it should also have a board for the men to stand on to keep their feet dry.

THE question of tools in most shops is a big one and in a small place it is impossible to have a stock or tool room. I have found it best to provide each man with a good general kit, in addition to the regular bench tools, and making him responsible for it. There are more pliers, screw-drivers, and monkey wrenches lost through being left on the side of a car, or tractor, than in any other way, but if a man knows he is losing what practically amount to "his own tools" you can bet he will take a good look around the job to see that he has left nothing where it is liable to get lost.

A few cans of paint are a handy thing around a shop. Did you ever notice how you were always willing to pay for a pair of shoes being repaired when the cobbler sent them out all ready shined up? It is just the same with machinery repairs. Why should machines go out showing signs of having been in the fire to straighten, or the paint scraped off for soldering, when by a little touching up with a paint brush they will show no signs of having been repaired at all? Even if the repair can be seen through, a patch having been necessary, it will show a good deal less if it has a coat of paint to match the rest of the machine.

The assortment of colors is not large; a pint can each of black, white, crimson, green and battleship grey will cover most all that is necessary. One one-inch brush will do for all of them if cleaned after use each time.

THE above are just a few pointers; each shop will have to work out its own system to suit its particular needs, and the only man who can do this in most cases is the man on the job. But, take the foregoing as a foundation, then install suitable racks for repairs, trouble-light sockets on the walls instead of using the lighting fixtures; see there is a hose rack and that the hose is hung on it all the time it is not in use; have good rubber boots and rubber apron for washing purposes and a few other conveniences that are not expensive; and you will soon have people saying: "My, you have a fine place here"—and that is what every garage owner likes to hear.

PRESSURE GUIDE

THE following table is a useful guide for regulating pressure:

SIZE	WEIGHT	PRESSURE	
		Cord	Fabric
3½	360	32	35
3½	515	45	50
3½	670	59	65
4	500	36	49
4	750	54	60
4	1000	72	80
4½	675	41	45
4½	825	50	55
4½	1000	63	70
4½	1200	72	80

In order to get the maximum weight, the weight of the loaded car should be taken and divided by four, this will give the amount that each tire carries approximately.

It would seem from examination of the table that the inflation of from 70 to 80 lbs. is much too great and that it should be dropped to somewhat near that given. Hot weather increases the tire pressure to a certain extent but a variance of 4 or 5 lbs. matters but little.

SPEEDOMETER VIBRATION

WHEN the speedometer vibrates, look for loose connections, unions, the flexible shaft bent at too sharp an angle, lack of lubrication, or the gears not meshing properly. For failure to indicate speed, the instrument may be examined for the troubles mentioned, as well as for a broken chain link.

Noise is probably due to the above causes, or to lack of lubrication. The lubricant container may be placed in hot water and the melted lubricant poured about the flexible shaft. The shaft is disconnected at both ends and held in a vertical position for the purpose. If the speedometer trouble seems to be of a serious nature, communicate with the makers of the instrument.

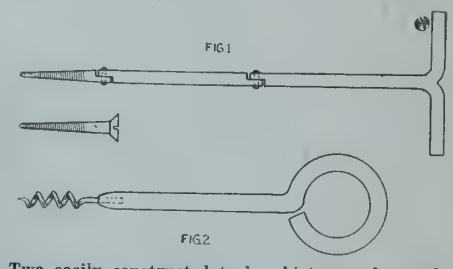
GEAR TOOTH HARDENING

GEAR teeth may be hardened by applying the oxy-acetylene welding flame along the surface of a tooth and then allowing the heat to be conducted away from the body of the gear. This intense heat of the flame permits of a single tooth being heated very rapidly, before much is conducted to the rest of the gear. As soon as the flame is removed the heat in the treated tooth is conducted away from the body of the gear. This causes hardening of the tooth. This operation is repeated until the desired depth of hardening is reached.

The teeth may be hardened by this method to a depth of 3/32 inch. The rapidity with which the treated tooth may be chilled may be greatly increased if the gear is partially immersed in water while the treatment is going on.

UNIQUE PACKING SCREWS

IT pays a fellow to go through the repair shop of the other fellow's garage; at least I have found it so, says a writer in the *Automobile Dealer* and *Repairer,* for I always ferret out a few new kinks or ideas from the boys that I talk with and exchange ideas with. During a recent visit in Manchester, N. H., I picked up the two ideas shown in the sketches—a couple of small packing screws that are very easy and cheap to make.



Two easily constructed tools which may be used for removing packings, etc., or dirt from small holes.

The type shown in Fig. 1 is made from rod and a part of a common wood screw. This is a universal joint type that makes it easy to take packing out of any hard-to-get-at stuffing box.

The kind shown in Fig. 2 is still simpler and easier to make, for it is made from a bit of small rod and a portion of a corkscrew, this being soldered in the end, as shown. No directions for making seem necessary, for the sketches tell the story. If you add these to your tool kit it is an easy matter to repack the circulating pump of any motor.

QUESTION BOX

CLEANING GARAGE FLOOR

From W. G. McG.—Will you kindly give me some receipt for cleaning garage floors? The area is large and the floor is badly stained with grease and dirt.

Reply.—First try a strong solution of potash, lye and water. Mix about a can of potash to a pailful of water. If this does not remove the dirt use a solution of strong washing soda and water. Neither of these solutions will damage the floor, provided it is well scrubbed with clean water afterwards.

For cleaning concrete or cement floors a pint of hydrochloric acid (muriatic) to ten gallons of water will remove deep stains. This solution tends to eat into the cement, however, and must be used carefully, flushing off the floor at frequent intervals with clean water mixed with a small amount of potash or washing soda.

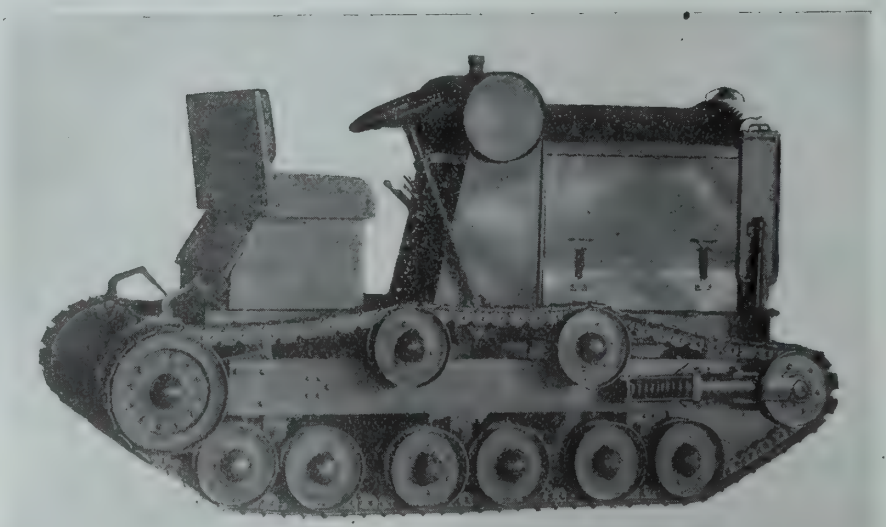
Automotive Accessories *and* Implement Equipment

NEW TYPE TRACTOR

A NEW self-laying track type of farm tractor has been designed by C. H. Martin, of the Martin Rocking Fifth Wheel Company, Springfield, Mass.

The tractor is the outcome of experimental work which Mr. Martin did with the Ordnance Department at Washington. The tread is made entirely of pressed steel, which means light weight and great strength.

The design admits of the use of the conventional motor truck construction and eliminates the many trappings usually found on this type of machine. The tractor is designed to pull three plows.

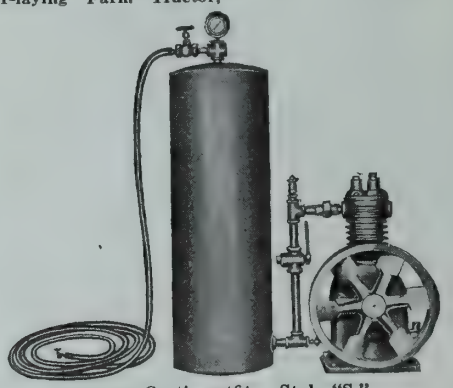


The Martin Rocking Self-laying Farm Tractor.

NEW STYLE "S" CURTIS

THE Curtis Pneumatic Machinery Co. of St. Louis, are offering on the market a new outfit known as their Style "S". The outfit includes an air compressor with hand unloader and tight pulley, welded steel pressure tank with air gauge, drain cock and pop safety valve. The piping between compressor and tank is made specially substantial and of convenient pattern to save floor space and prevent breakdowns and trouble. Has an outlet cock from tank, 20 ft. hose with tire chuck. The Style "S" is made in five different sizes up to the usual Curtis standard of excellence, and is ideal for those seeking a complete outfit at a minimum outlay, for they will deliver more air than portable machines that cost from two to three times as much.

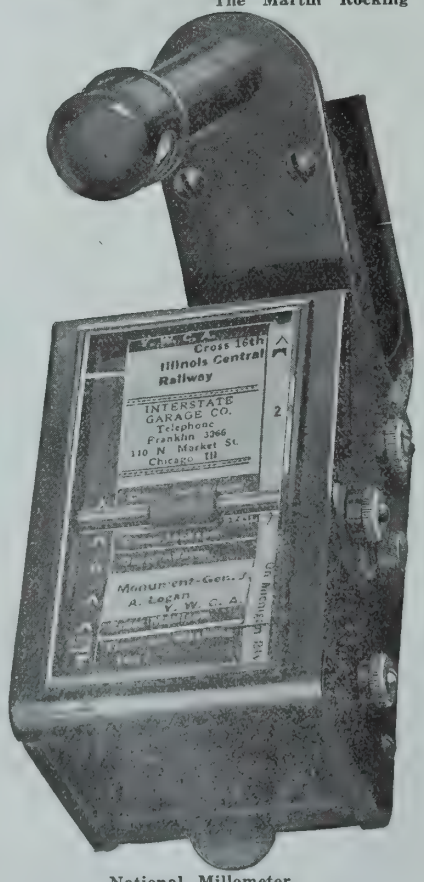
The Curtis Pneumatic Machinery Co. issue an interesting little booklet which is sent free to those interested.



...w Curtis outfit. Style "S."

LIBERTY HORN

E. A. LABORATORIES, Inc., 52-84 Broadway, Brooklyn, N. Y., manufactured a warning signal during the war for military trucks, and the signal is now on the market for general distribution—E. A. Liberty, Model L Hand Horn. The horn is of gear construction, case-hardened, has outside tone adjustment facilities, and is equipped with a flat wear piece on diaphragm.



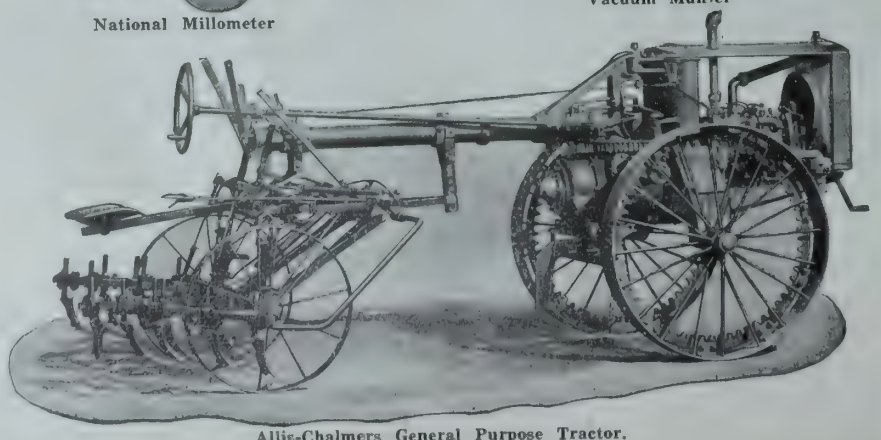
National Millometer

Vacuum Muffler

NEW ALLIS-CHALMERS

THE Allis-Chalmers 6-12 General Purpose tractor is for general farm use now on the market. In this tractor, they are offering a two-wheel, light construction tractor with a four-cylinder L head enclosed motor, capable of developing a drawbar pull of one thousand pounds, and of doing the work of a good four-horse team, which can be used all the year round from planting time through discing, harrowing, cultivating and harvesting. It has plenty of power to operate either a single or double row cultivator with sufficient clearance to do this work as long, if not longer, than any tractor now on the market.

This tractor is efficient and practical when used in connection with a disc, spring tooth or smoothing harrow, hay loader, mower, binder, potato digger or 16-inch plow. When this tractor is used in connection with the plow, it is said to have sufficient excess power to handle at the same time attachments such as a small disc and smoothing harrow. By so doing, the seed bed can be prepared in one operation. It can be attached to practically any of the standard farm equipment of to-day with very little effort.



Allis-Chalmers General Purpose Tractor.

VACUUM MUFFLER

The proper disseminating and cooling of the exhaust gases is emphasized as one of the features incorporated in the vacuum muffler, made by the Vacuum Muffler Corporation of America, 154 Nassau Street, New York.

This muffler was originally designed by a Norkegian, but was later improved and is now being manufactured under American patents.

This muffler is claimed to be radical-by a Norwegian, but was later improved sign of exhaust mufflers in that it breaks up and divides the flow of exhaust gases into numerous small streams or waves by means of radial fins. This effectually cools the gases in their passage through the muffler and by the time they escape through the outlet opening of the muffler they are near atmospheric temperature. This, of course, relieves the back pressure of the motor and, therefore, makes the motor operate more efficiently and at a lower temperature.

This muffler is especially adaptable to tractors on account of the small space which it occupies when installed, and, also on account of its indesructibility through use. Vacuum Mufflers are made in various sizes to fit different types of motors.

MAPS ELIMINATED

Inventive genius has found a scientific substitute for the road logs, route books, and maps that touring motorists are in the habit of using during the season.

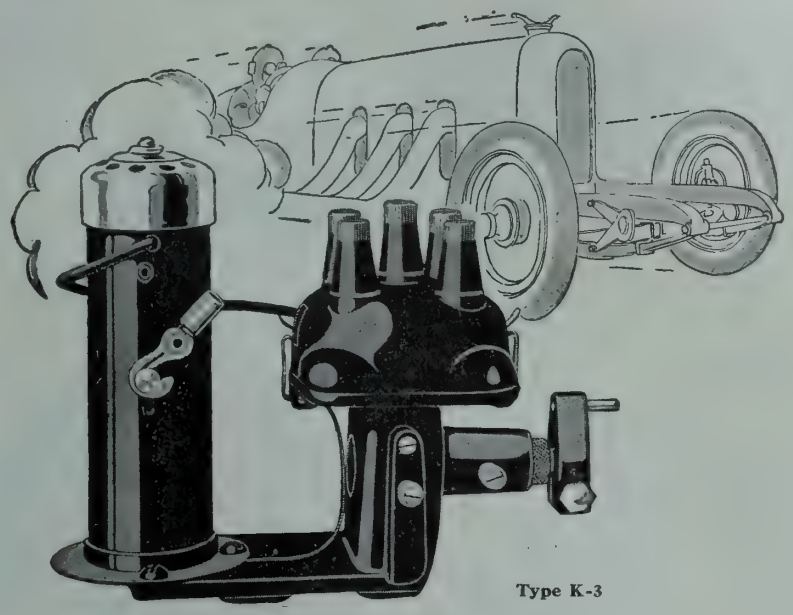
There has been introduced in Detroit by the National Mileometer Company, 75 West Congress Street, what is called the "National Mileometer," an automatic road-guide that attaches to the instrument board or dash of any automobile and is connected with the front wheel. As the car starts the tape begins to unwind which indicates the motorist's exact position anywhere on a trip, and also warns of turns, bridges, railway crossings, hotel and garage accommodations, historic points of interest, and a host of other information necessary to the tourist passing through the country, with which he is not familiar.

The machine is simplicity itself. Being small and compact in size, it works with accuracy that is almost uncanny. On return journeys all that it is necessary to do is to reverse the tape.

The National Mileometer Company, which has its headquarters in Detroit, has logged and recording on tapes, thousands of miles of roads in the middle west, as well as East. There are many Ontario routes thus logged.

C. G. E.
Automobile Accessories
"Tested for Service"

Quality and consistency are the two predominating features of C.G.E. Automobile Accessories. Quality---the result of never leaving the experimenting to our customers; and consistency---which is maintained by invariably letting quality be the deciding factor.



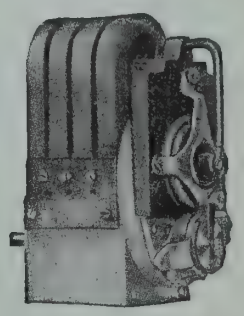
Type K-3

Atwater Kent Ignition

Furnishes a big, hot, dynamic spark required by tractor motors at all speeds from cranking to maximum. The same big spark when cranking (no matter how slowly) as at full speed is an inherent characteristic of the system and is not obtained by adding impulse devices, vibrators or other complicated mechanism. The spark heat does not vary with the motor speed as with the use of a magneto.

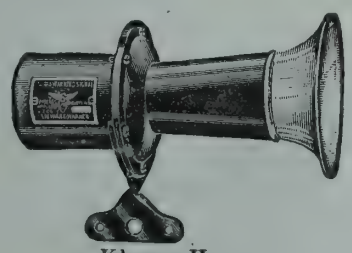
"Kopper King" Spark Plug

Sectional view of the half-inch regular size. To protect the body of the plug it is heavily coated with copper which eliminates rust trouble, absolutely preventing the temper-trying exasperation of a spark plug rusted fast into the cylinder head. For all-round satisfaction-giving qualities the "Kopper King" is without an equal.



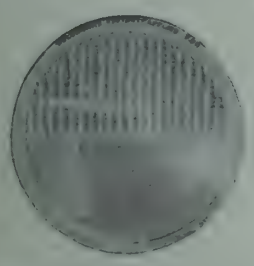
K-W Magnetos—Model H

The K-W Magneto makes a splendid source of supply for a tractor lighting outfit. The current for the K-W electric lighting outfit is taken direct from the generator. There is NO storage batteries, NO commutator, NO complicated cut-outs, NO ammeter, NO difficult connections to make or any delicate electrical instruments to get out of order or go wrong.



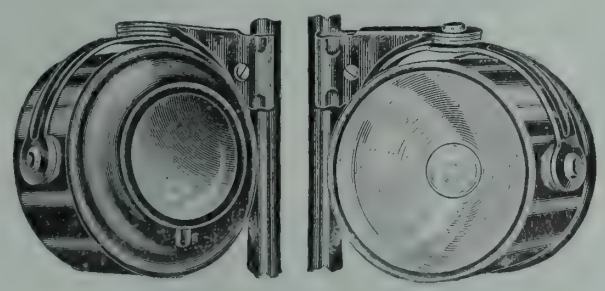
Klaxon Horns

One of the most important accessories on an automobile—and one that receives very little consideration—until there is an emergency—is the horn. Klaxon Horns have a penetrating tone and are of remarkable construction. They require practically no attention whatever. Safeguard yourself by installing a reliable warning signal.



Holophane Headlight Lens

Glaring headlights are a menace to night driving. Holophane lens bend down the concentrated searchlight beam below the 42" line, and yet lights the road 250 ft. or more ahead of the car.



Stewart V-Ray Spotlight

The new Stewart V-Ray Spotlight is brand new in design, construction, finish and efficiency. A 3½-inch reducing mirror is located in the back. An important feature is the focusing device which permits replacing the bulb with any bulb on the car.

Boyce Motor Meters

Give warning sufficiently in advance of any costly damage due to overheating or overcooling, because of broken fan-belt, water-pump, clogged circulation of either cooling or lubricating systems or the lack of water or oil in same.

C. G. E. Automobile Accessories are for sale by all reliable dealers

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OLSON EXTENSIONS

THE Swedish Crucible Steel Company are now manufacturing Olson Frame Extensions with side springs for Ford ton trucks in Canada. It is claimed that the use of these extensions increases the service of the Ford truck as it permits the mounting of larger bodies for bulky or fragile loads, and also, through the use of long side springs in place of the regular Ford cross spring, provides spring resiliency under all load conditions.

It is claimed that the Ford truck will last longer and give better service when equipped with these extensions and side springs, as all body overhang and rear whip is eliminated, and the long side springs take up the road shocks and thus reducing the vibration throughout the whole chassis.

A-C SPEEDOMETER

THE A-C Speedometer brought out by the Champion Ignition Co., Flint, Mich., is a magnetic type of marked simplicity, and with an ingenious method for regulating and maintaining accuracy in spite of variations in temperature.

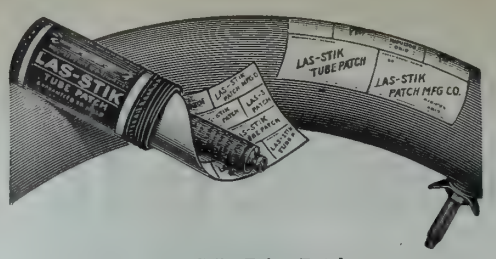
The speedometer operates entirely on the magnetic principle, having a stationary permanent horseshoe magnet held securely in the interior of the instrument in a manner which is similar to magneto and galvanometer construction. The magnet is stationary and the armature rotates within it, being driven by the flexible shaft which is connected with the driving mechanism of the car. The armature revolves in the magnetic field between the poles of the horseshoe magnet, the magnet poles being ground to receive it.

The armature is segmented into poles, the magnetic current passing through them and thrown or shunted in the direction of rotation, carrying with it a non-magnetic element in the form of an inverted aluminum cup having on its periphery the scale which indicates the velocity of the vehicle either in miles or kilometers per hour. The light weight of the aluminum cup renders it so sensitive to the magnetic drag that the instrument starts to register at a speed of 1 mile per hour. The speedometer is graduated up to 75 miles per hour, with graduations indicating every mile. The indicating element is a hair line crossing the glass window through which the speed is read, in much the same way as the hair line on a slide-rule indicator.

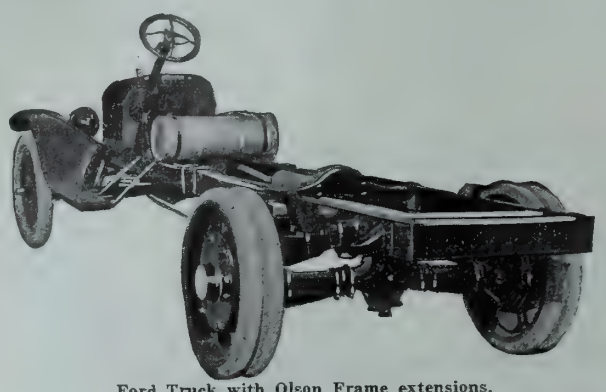
Objections to magnetic speedometers in the past have generally centered around the fact that the magnet expands in warm weather, thereby removing the poles to a greater distance from the armature. This slight variation is compensated for in the A-C instrument by an automatic thermostatic control which changes the relation of the armature laminations one to the other, thereby advancing or retarding the magnetic flux as may be necessary. In this way the speedometer will give correct reading regardless of the temperature conditions. There is an adjusting screw for making the primary setting on the magnet, and this is set at the factory and then sealed so that it cannot be tampered with by the ordinary user to throw the speedometer out of adjustment.

The construction of the instrument is such that the speed-recording elements are contained in one-half of the housing and the odometer components in the other. The only connection between the two is a worm shaft which operates the odometer. The odometer will register mileage covered by the vehicle up to 100,000 miles and repeat on the total, which in this instrument is placed on the right-hand side, it being considered more natural to read totals summed up to the right. The trip register, which can be reset at will, either forward or backward, to any desired figure, is placed at the left. It registers in miles and tenths of miles to 100 and repeats, the tenth figure being the same color as the unit figure, but divided by a decimal point.

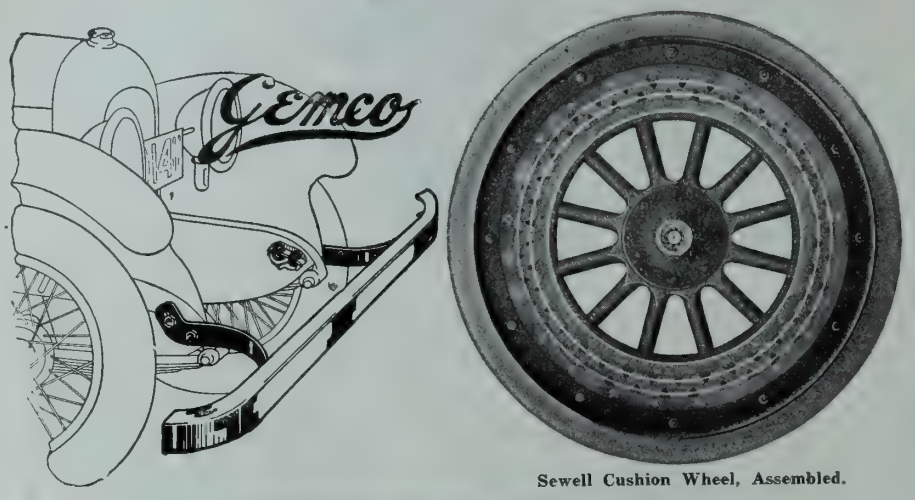
Burgess Rebound Check and Shock Absorber.



Las-Stik Tube Patcher.

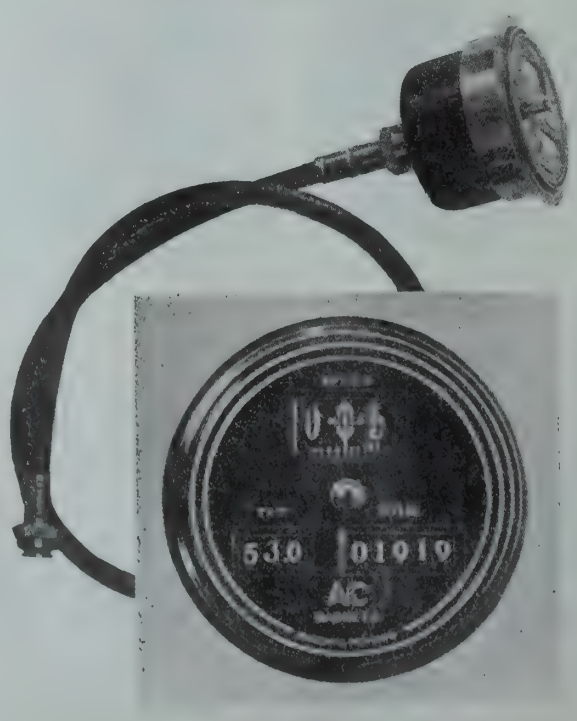


Ford Truck with Olson Frame extensions.



Sewell Cushion Wheel, Assembled.

Sewell wheel, showing zig-zag cushioning device.



A-C Speedometer.

SHOCK ABSORBER

THE Burgess Rebound Check and Shock Absorber has recently been placed on the market by the Zinke Company, 1323-1325 Michigan Boulevard, Chicago. At the top of the spring there is a rubber cap, which is said to absorb vibrations faster than they can occur. The spring decreases the action of the leaf spring. Frictionless action, instant adjustment and wear proof bearings are other features of interest.

LAS-STIK PATCH

THE Las-Stik Patch Mfg. Co., Hamilton, Ohio, has placed on the market a "cold" patch, which is claimed to be the strongest made, having a breaking test of 2,600 lbs. It is 3-64 inch in thickness, while most patches are only 1-32. This makes the patch the same thickness as the average inner tube. Las-Stik has a backing which is 2-64 inch in thickness, cured under exclusive heat and pressure process, with a 1-64 inch adhesive raw rubber facing, specially treated. Las-Stik has resisting as well as stretching qualities. The stretching of Las-Stik is about the same as that of a tube and therefore reduces the strain subjected to a patch having unlimited stretching qualities and no strength. It weighs 4 lbs. to the square yd.

GEMCO BUMPER

THE Gemco Spring-Channel Bumper with its universal Hook-On Brackets attaches to all standard cars at the front and a number can be fitted in the rear. These brackets, which are made of high grade oil-tempered flat steel springs, are reversibly universal in their attachment. The forward ends of the brackets securely support the 2-inch channel bar by a strong yoke, which cannot loosen, become disconnected or rattle. All parts finished in hard rubber black enamel except the channel bar, which is nickel or black, as ordered. It is manufactured by the Gemco Manufacturing Co., Milwaukee, Wis.

SEWELL CUSHION WHEEL

THE Sewell Cushion Wheel, made by the Sewell Cushion Wheel Company of Detroit, Michigan, presents a very interesting and efficient solution of the problem of overcoming the bad effects of vibration due to use of rigid wheels and solid tires on motor trucks. It has been on the market for several years in the U.S., but is new to the Canadian trade.

As the illustration shows, the Sewell wheel has a complete inner wheel with steel wheel band or tire not different essentially from those in ordinary truck use, except that the spokes are shorter, and therefore makes a stronger and more rigid wheel, the wheel being made in both single and dual types and to fit the different hubs used by motor truck manufacturers, and equipped with S. A. E. Bands which will take any standard make or style of solid tire of the same size.

It is in the cushioning device that the Sewell wheel is different. The cushion is of 94 per cent. pure Para rubber, made zigzag in section and extending around the wheel band of the inner wheel. It is held in place by rubber flanges one on each side of the wheel, cemented to the felloe of the inner wheel and to the extra wooden felloe which goes over the cushion, and transmits the load through the inner wheel, the flanges being further held in place by side steel bands, one on each felloe.

This construction, while giving solid strength to the wheel, makes the space occupied by the soft rubber cushion absolutely proof against dirt, grease, water and light, the elements that cause rubber to deteriorate and lose its life and resiliency.

GARAGE HEATER

A GARAGE heater which has several new points is being manufactured by the Ripley Mfg. Co., Grafton, Ill. It has a closed base, preventing danger from fire, and is suitable for garages, work-shops or even small summer homes. It may be attached to radiators, pipes or water tanks. It works on the same principle as other hot water heaters, except that the heat is controlled by a regulator which opens and closes draft automatically. It holds fire over night. Its height from floor to upper tapping, is 30 inches, and, less all fittings and regulator, it weighs 235 lbs.

TIRE SUB-CASING

What is claimed to be a boon for car owners, owing to saving in money and trouble on tires, has been placed on the market by the Universal Tire and Rubber Co., 474-6 Mills Bldg., San Francisco, Cal., under the name "U-V" Sub-Casing. This is an inner tire, or sub-casing, which fits inside the outside tire. It is stated that this is in no sense an "interliner" made of fabric. It is an inner tire, or casing, or sub-casing varying in thickness according to the size of the outside tire which is installed or inserted between the tire and the inner tube; its composition consists of several layers or plys of white duck fabric peculiarly impregnated with rubber and the layers of each impregnated rubber fabric are alternately interlayed with a layer of rubber. The rubber impregnated in the canvass, as well as the layers of rubber interlayed between the fabric, is manufactured under a special formula, and the entire sub-casing is vulcanized under a special process, all of which serves to carry the peculiar resilient effect produced when installed.

SPOT LAMP

The windshield spot lamp, which can be focused on almost any object at any angle ahead of the car, is now manufactured by the K-D Lamp Co., Cincinnati, Ohio. Model 12 is a spot lamp, neat in appearance, having an outside focus adjustment, swivel bracket, handle conveniently placed, a 3 in. condensing mirror for day driving, special type switch and positive lock door. Reflector is parabola in shape, drawn from heavy gauge brass, and silver plated. Body is drawn in one piece from heavy gauge steel, two coats enamel baked on. Door is hexagon shape highly finished and nickle plated. Bulb is 6-8 Volt, 21 c.p. Madza "C" double contact unless otherwise ordered. Sufficient cord is furnished for attaching to lighting system. Each is packed in an individual carton.

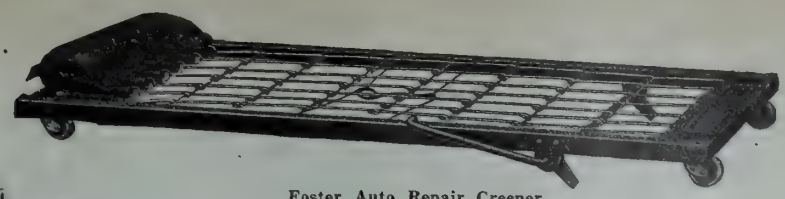
NEW STYLE "CLASS TOP"

THE illustration shows the KING "8" Foursome with a new style permanent top which the makers have christened the "Class Top." Plate glass is used entirely throughout the curtains and the permanent back and sides of this car. The sides of the top are removable from the windshield back to the tonneau and storm curtains are provided for summer weather. This style top is said to be becoming more popular every day as it gives all the protection of the Sedan with a great deal less weight.

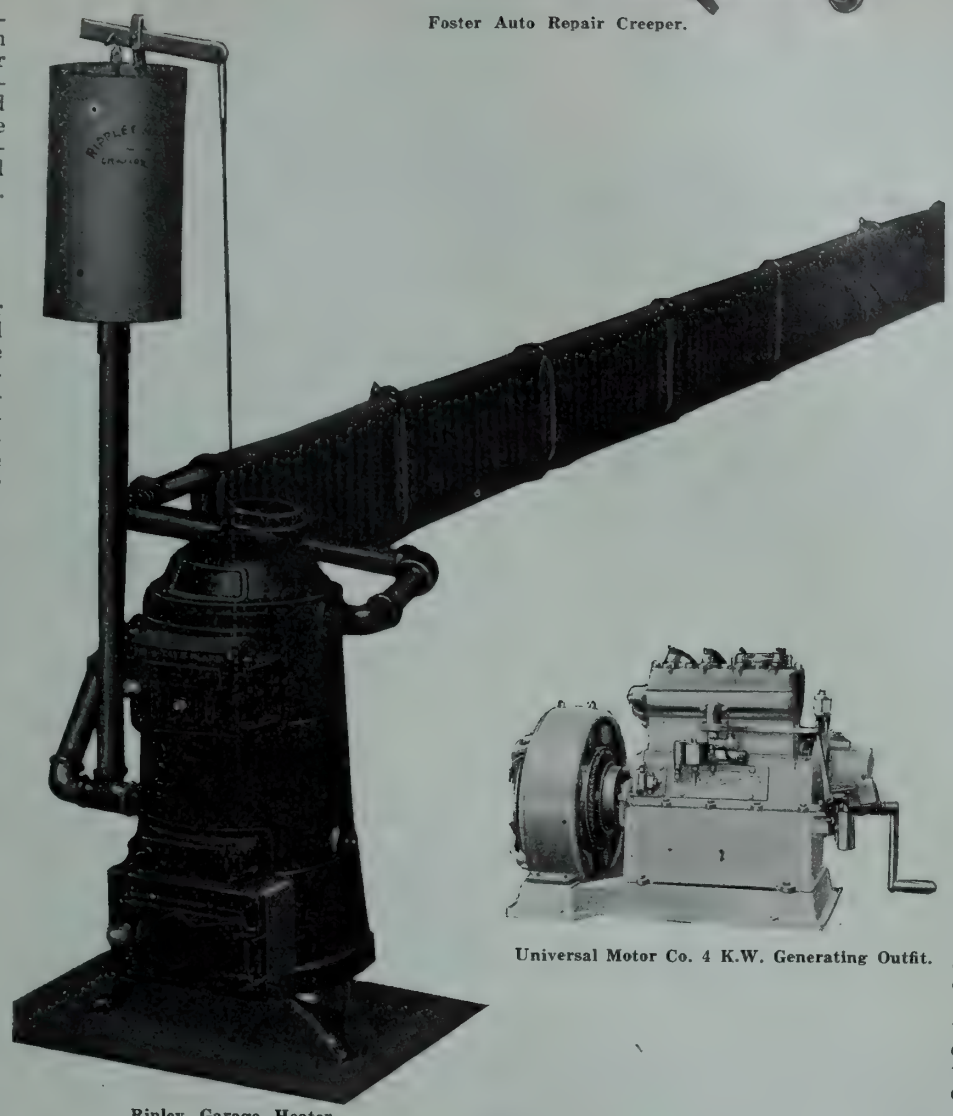
FLICKERLESS LIGHT

THE Universal four-cylinder generating outfit, which is said to give a flickerless light, is manufactured by the Universal Motor Co., Oshkosh, Wis. The Universal outfits are supplied in both stationary and portable combinations, in voltage to suit the work and equipped for gasoline, kerosene or gas.

The Universal engine operates on kerosene or distillate after being warmed up on gasoline, but for short runs it hardly pays to bother with anything but gasoline. A great many users mix kerosene and gasoline together in various proportions to give a little better vaporization.



Foster Auto Repair Creeper.

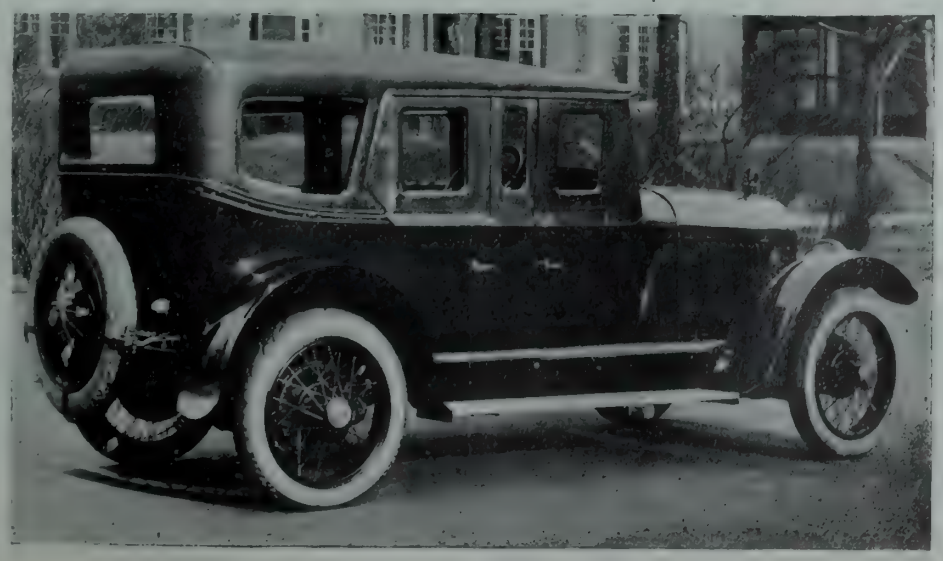


Ripley Garage Heater.

Universal Motor Co. 4 K.W. Generating Outfit.

K. and D. Lamp.

Legalite Junior Lens for Fords



King "8" Foursome with New "Class Top."

The principal features of the universal Set are its compactness, high degree of quality of construction and exquisite smoothness of operation. The steadiness of operation is brought about by the substantial and sensitive throttling governor. This governor is fitted in an oil tight casing with easily removable cover. In this location it receives oil automatically from the gear case. The speed is maintained at a uniform point by the governor acting on the throttling valve of the carburetor or gas mixer. A weight is provided on the governor lever, which can be moved a limited distance along its support rod to change the speed to a limited degree. This weight holds the governor parts against lost motion.

A dash pot is provided with a plunger connected to the governor lever which prevents sudden fluctation, the same as is used on the large steam engines. This is kept filled with kerosene or light oil and prevents the plunger and lever from suddenly moving from one extreme to the other.

The fact that the governor is enclosed and runs in oil eliminates the trouble of oiling these small parts, in fact the entire oiling system is automatic ,the oil being delivered from the pump to the gear case and governor, thence down into the dip pan below the connecting rods, where each rod dips and splashes oil entirely over its bearings, over the cam shaft and upon the cylinder wall and inside the piston, the piston pin also reeciving its share of the splash. The oil then flows down to the reservoir below the pan to be again circulated by the oil pump. The lubrication is positive and dependable and requires no attention other than the supplying of the base with a good grade of motor oil.

A self-contained plant with auto radiator mounted is provided for portable work. The radiator is sufficiently large to take care of the cooling and has a special fan housing and large, high speed fan running in ball bearings and driven from generator shaft.

The radiator is of the thermosphon type and does not require a water circulating pump. A 5 gallon gasoline tank is mounted over the gear case cover as shown.

A switchboard can be added to the Unit Plant when desired, this equipment is shown hreewith crated, ready for transport from one place to another, when the sides of the crate are closed. This outfit is used largely for portable work, such as traveling picture shows, carnivals, field wireless outfits, contractors search lights for night work, etc.

The switchboard can be dispensed with to save cost and the rheostat set up conveniently. The rheostat is supplied with the generator.

AUTO REPAIR CREEPER

THE Foster Auto Repair Creeper, built by Foster Bros., Mfg., Co., Utica, N. Y., has an indistructible steel frame and it is claimed that, even if run over by a car, a few blows of the hammer will fit it for use again. It has a link spring, which conforms to the body; ball bearing, free running casters; and an anchoring device which allows the creeper to be locked firmly in position.

FORD HEADLIGHT LENS

THE "Legalite Junior" is a product of the Lenlite Corporation, 120 Franklin St., Boston, Mass., and is constructed along the lines of the regular Legalite lens. It is a special lens, lighter than the regular model, built for Fords, and is claimed to "cover the road and cover the law."

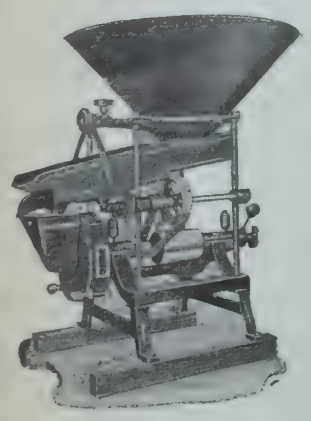
LUMINOUS MATERIAL

"Luma," a luminous material for painting all dials used on the dash of automobiles, trucks and aeroplanes, has recently been placed on the market. It is claimed that, with an application of "Luma," any instrument can easily be read at night. Manufacturers: Radium Dial Co., Pittsburg, Pa.

We Have Manufactured

GRINDERS

and nothing but Grinders for over 35 Years



TRADE MARK S.V. REG

THE SIGN OF QUALITY

"VESSOT" FEED GRINDER

Wherever you find a "Vessot" Grinder you will find a contented user. The "Vessot" always satisfies.

Vessot Grinders have obtained medals and highest awards wherever exhibited—Chicago, Paris, etc.

We make nine different sizes of grinders 6½", 8", 9", 9¼", 10½", 11" B Farm Type and 11", 13" and 15" Mill Type, or in other words, we build a machine to meet any requirements.

The agency for Vessot Grinders will net you a good commission.

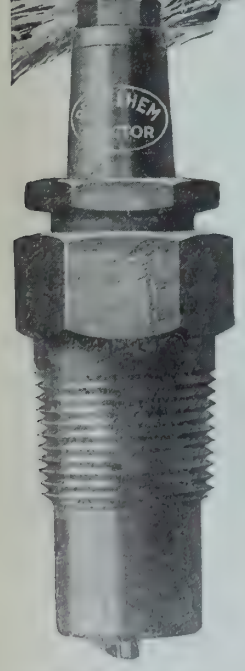
May we mail you our proposition? If so, write to the nearest branch of International Harvester Co.

INVENTORS AND MANUFACTURERS

S. Vessot & Co., Joliette, Quebec

Sold exclusively in Canada by
International Harvester Co. of Canada, Limited.

Branches: Calgary, Edmonton, Lethbridge, North Battleford, Regina, Saskatoon, Yorkton, Brandon, Winnipeg, London, Hamilton, Ottawa, Montreal, Quebec, St. John.



IN spite of a far higher selling price, Bethlehem Tractor Plugs are the largest selling tractor plugs on the market.

The International Harvester Company and other prominent tractor manufacturers use them as standard equipment. Price is no argument, because performance—*real performance*—is built into every plug.

Stock the Bethlehem line of tractor plugs, and build a growing, profitable business among tractor owners in your territory.

THE SILVEX COMPANY
BETHLEHEM PRODUCTS
E. H. SCHWAB, President
BETHLEHEM, PA., U. S. A

¾ inch long mica tractor plug. Used as standard equipment on International Harvester Tractor and others.

Bethlehem SPARK PLUGS

Implement Case Tried in Court

THE Gananoque, Ont., *Journal* reports a recent decision of Judge Madden's, which will be of interest to all to all implement dealers throughout Canada:

Judgment pronounced by His Honour Judge Madden. The evidence well proves the facts and circumstances set out in the Statement of Claim.

1. The Defendants' agents agreed to supply an ensilage cutter for the Plaintiff's purposes to cut his own and his customers' corn and the Plaintiff relied upon and trusted the judgment and skill of Defendant's machine and this was in the mind of the contracting parties at the time and was a condition collateral to the order given for the machine and upon which the obligation to pay was dependent as well as that the machine should work properly and satisfactory.

2. The machine furnished to the Plaintiff was not what the Defendant's agent represented and after the final test by the Defendant's agents the work was by them declared to be unsatisfactory.

3. I find that the Defendant's agents had full notice and opportunity to make the machine in question work satisfactorily but failed to do so.

4. I further find that the machine is useless for the Plaintiff's purposes and of which the Defendant's agents were fully informed.

5. I accept the evidence of the Plaintiff and his witnesses in preference to that of the Defendant's agents where their evidence conflict.

6. The Plaintiff is entitled to be paid the price of a horse and cow delivered to the Defendant's agents as part payment for the machine in question, and which I find to be the sum of $175. For the storage of the machine I fix the sum of $10.00. For loss of time and expenses incurred for trying to make the machine work and to supply another cutter, I fix the sum of $25.00. For the loss of profits in not being able to do the customer's work, $50.00. Total, $260.

7. The Plaintiff is entitled to have delivered up to him and cancelled the three Promissor yNotes given to the Defendant in payment of balance of purchase price namely:

1. Note for $21.00 due October 21st, 1917.

2. Note for $50.00 due October 21, 1918.

3. Note for $50.00 due October 21st, 1919. Total $121.00. Total amount altogether $381.00.

The Plaintiff is entitled to be paid his cost by the Defendants and I direct that judgment be entered accordingly.

OVERLAND CONVENTION

THE big convention of Eastern Canada Overland dealers was held at the Exhibition, Toronto, during the first week of the Fair. The main topic of discussion was the new Overland 4.

Much interest has been evoked throughout Canada and the United States over the expected introduction of a new model by the Willys-Overland Company, and there had been considerable speculation as to what outstanding features it might have to distinguish it from other cars. The fact that it was to be ready for the Canadian National Exhibition made it possible to hold the convention then, thus enabling the dealers to combine pleasure with business.

From Halifax to the Sault they came, and besides having a most enjoyable visit here they had a profitable conference. Sales Manager W. A. Dover presided over the meetings, which were opened by Mr. T. A. Russell, President and General Manager of Willys-Overland, Limited. At the first morning's session Mr. J. G. Perrin, Assistant General Manager and Chief Engineer in charge of production, went into technical details to show the advantages of the new car, with the stress, of course, upon the very new spring suspension principle involved. There is a three-point cantilever construction that distributes shock, giving Overland 4 exceptional riding qualities.

Addresses were also given as to company policy by Messrs. J. F. MacKay, Secretary and Treasurer; H. E. Brasier, Service Manager, and J. R. Robertson, Advertising Manager. L. J. R. Rowlands, of the Continental Guaranty Company, was a speaker also. The visiting dealers were given demonstration rides in the new car Tuesday, and yesterday morning they saw moving pictures of the great transcontinental test tour made by Overland 4.

BEEMAN ALTERS NAME

The Beeman Garden Tractor Company announces that it has dropped the word "Garden" from its name and will hereafter be known as THE BEEMAN TRACTOR COMPANY. Its tractor shall hereafter be known as "THE BEEMAN TRACTOR."

This change has been under consideration for some considerable length of time and the change is due to changes in conditions.

At the time this company was incorporated, the purpose was to make a tractor for use in truck gardens only. As the machine got out into the field, the owners made it do the work, changes were made and developed in the machine, which to-day is by no means confined to use in truck gardens, but instead will do any one-horse work. It is a 2-4 horse power tractor. It seems that the word "Garden" conveys the idea that the tractor is limited to use in gardens only.

POWRLOK CANADIAN BRANCH

The Powrlok Company of Cleveland, Ohio, announce that arrangements have just been completed for the opening of a Canadian branch, which will be located at Walkerville, Ontario. The branch will combine a general Canadian sales office and an assembling plant and will be under the supervision of Mr. D. C. Nale, who is well known in automotive circles both throughout the Dominion and in the United States.

SOME DIFFERENCE

We have a McLaughlin, Model D55, 1916, writes an auto owner in Montreal. In the spring of this year we broke the pinion gear, which necessitated us putting it into a local shop for repairs. When finished with repairs, our bill was $94.50, (ninety-four dollars and fifty cents), we being charged with 96 hours work on same. Well, last Tuesday, Dominion Day, while just this side of Plattsburg, N. Y., the pinion gear broke again. I put the car in the Plattsburg garage, and the two mechanics set to work on it at once. When their job was finished, I was presented with a bill for $26.35, (twenty-six dollars and thirty-five cents), of which amount, $11.25 was for 15 hours work. Now, Mr. Editor, don't you think that quite a difference in repair bills, but, once bitten, twice shy.

THE RIGHTS OF THE MOTORIST

Mrs. Antone Pfleger and her daughter were injured seriously last Saturday when a motor car passed them on the road. They were riding in a single buggy and the car passed them from behind, seemingly without warning. The horse shied, and tipped over the buggy with the above results. The driver of the car beat it without assisting the two women, and, consequently, is deserving of a good hazing if found out. A horse and buggy has as much right on the road as any motor car, but there are a lot of half-baked drivers who think it smart to whiz by a team at 30 or 40 miles an hour. A driver who does not slow up, and stop, if necessary, on meeting a team, should be booted into the next township.—*Allan Tribune.*

A Golden Opportunity

Wide-awake dealers who have investigated S. A. T. tell us that our tractor will easily lead the field. Thousands will be sold during the next twelve months. S. A. T. is manufactured and marketed in Canada by a company whose reliability is unquestioned. It is guaranteed to be absolutely free from defects and to do satisfactory work. Dealers who know S. A. T. are glad to back its performance with their own reputation.

S. A. T.

Schofield Automotive Tractor

S.A.T. sells for $448. It will do everything that tractors costing three times as much will do. It converts any type of car from Ford to Packard into an efficient, practical farm tractor.

S.A.T. is not an experiment or a make-shift. Its merits have been proved by four years of actual use on many farms and by many more years of experimental tests.

S.A.T. is so simply constructed that dealers will find service demands practically eliminated. When you sell a S.A.T. you give the buyer the biggest value on the market and 99 times out of a hundred the whole matter is closed when the sale is completed, excepting that well satisfied users will send their friends to you for others.

The merits of S.A.T. are to be made known by the liberal use of the best farm papers and other mediums in Canada. Territory is going fast. Secure our dealers proposition without delay.

Orillia Tractors Limited

J. B. TUDHOPE, President. F.W. VOLLANS, Vice-President and Genrl. Mgr.
M. B. TUDHOPE, Secretary and Treasurer. W. H. TUDHOPE, Director.

ORILLIA - ONTARIO

A TRACTOR "MADE IN ALBERTA."

This illustration derives special interest from the fact that it shows one of the first "Canadian" tractors to be built in Medicine Hat by the Alberta Foundry and Machine Co., Limited. The Company have already produced several of these machines and they have stood up well under a stiff agricultural test. Production is being continued, but the output will depend on the ability of the Company to obtain material.

HAULS THREE BINDERS

At Vulcan, Alta., a farmer has been using a Rumely oil pull tractor in wheat cutting operations for the past three years. The machine is of 16-30 horsepower, and hauls three binders, each of which have an 8-foot cut. A total of 90 acres is the average day's work for this outfit.

WOMAN'S LABOR-SAVING MACHINERY

The interest in labor-saving machinery and devices for woman is increasing, we are happy to say, and the dealer who has not awakened to the possibilities which are to be found in the sale of washing machines, water supply systems, home lighting plants, and other things to make home more livable, will find, sooner or later, that the wife's influence is turning the trade of the man to the dealer who is up to date and who believes that the women are entitled to a share of his attention.

HUGE CAPITAL

The amount of capital invested in the American automobile industry is $1,297,000,000, which is greater by $250,000,000 than the capitalization of all of the U. S. national banks, which, in 1917, was $1,079,669,000.

Western News

MANITOBA

ALTAMONT.—The local council has purchased a 40-65 h.p. oil tractor to pull two graders on improve work, mostly grading.

RIVERS.—A modern garage, 50 by 80 feet, has been erected for Messrs. Thompson and Webster. A feature of this garage is its plate glass front and its cement floor.

WINNIPEG.—C. H. McFadyen, formerly principal owner of Christiansen Implements, Winnipeg, manufacturing plow, harrow and packer attachments, has sold out his interests in that concern.

WINNIPEG.—Heubach Limited, will erect a service station, costing between $75,000 and $100,000, in Lombard avenue, west of the Grange Hotel, for Houghton and Phillips, gasoline filling station owners and operators.

SASKATCHEWAN

REGINA.—The Auto Salvage and Repair Co., is open for business.

MOOSE JAW.—The George E. Thompson Lightning Rod Co., has been recently incorporated.

REGINA.—Farmers have bought extensively of small threshing outfits during the past few weeks.

SASKATOON.—The Roy Garage Co. has removed from its old premises to new quarters at 216 First Avenue N.

ALLAN.—Klaz and Senger, implement dealers, have sold their business to the Allan Grain Growers' Co-Operative Association.

SASKATOON. — Bowman Bros., well-known in the motor accessory business in this district, are planning to open a branch in Regina November 1.

GULL LAKE.—Quick delivery of headers was required here during August. Some second hand machines were brought into the district from the States.

INDIAN HEAD.—William Badenoch, who recently returned from overseas, after spending nearly three years in a German prison, has opened an up-to-date auto-tire vulcanizing plant. He learned his business at a recent course in an Indianapolis school.

ALBERTA

LETHBRIDGE.—G. T. Blunt has opened an auto accessory store.

STETTLER.—A. Asmussen, harness dealer, has sold out to Fraser Bros.

CAYLEY.—Robert McKerchar has established an auto and tractor business.

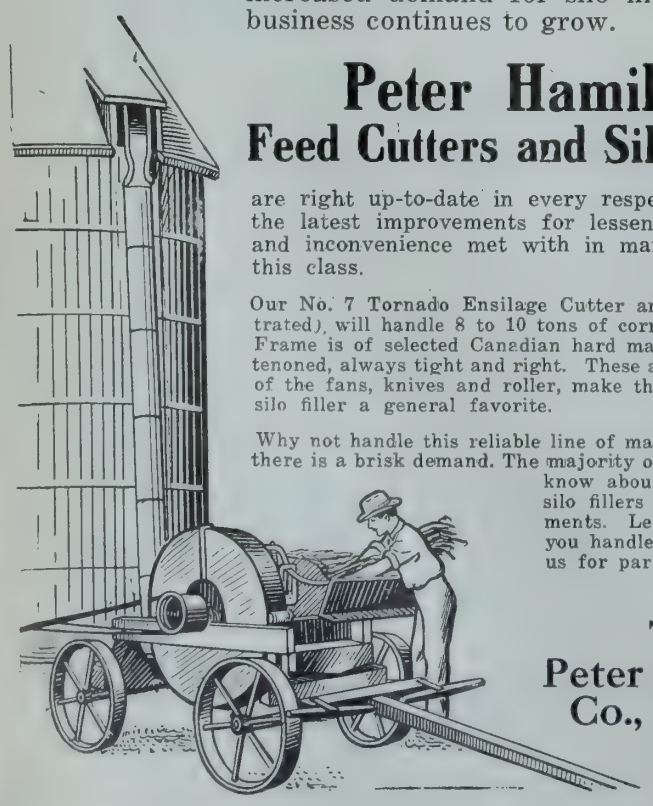
BRITISH COLUMBIA

PENTICTON.—Dave Yule, who conducted the Central Garage for several years, has sold out to H. T. Ewing.

CHILLIWACK.—Thomas Archibald has returned from overseas and assumed charge of the mechanical department of Lillie's Garage and machine shop.

Farmers with Silos Need Silo Fillers

Do farmers in your district grow corn? If they do, and have silos, you have a good chance of selling silo fillers. There has been a great increase in the number of silos throughout the country in the last few years, and in the amount of cut feed used by farmers. This growth has meant a greatly increased demand for silo fillers and the business continues to grow.



Peter Hamilton
Feed Cutters and Silo Fillers

are right up-to-date in every respect and embody the latest improvements for lessening the danger and inconvenience met with in many machines of this class.

Our No. 7 Tornado Ensilage Cutter and Blower (illustrated), will handle 8 to 10 tons of corn per hour easily. Frame is of selected Canadian hard maple, mortised and tenoned, always tight and right. These and other features of the fans, knives and roller, make the Peter Hamilton silo filler a general favorite.

Why not handle this reliable line of machinery for which there is a brisk demand. The majority of farmers already know about Peter Hamilton silo fillers and other implements. Let them know that you handle this line. Write us for particulars.

The Peter Hamilton Co., Limited
Peterborough Ontario

A PRIZE JOB OF TRACTOR PLOWING

The finished land of the winner of the first prize in the three-furrow engine-gang amateur plowman's class of the Provincial Plowing Match held at Portage la Prairie, Manitoba, is one of the finest jobs of plowing that has ever been seen. It was the admiration of all who saw it.

This prize was won by W. G. Chilton of the Winnipeg Branch of the Advance-Rumely Thresher Company with a 12-20 Oil Pull and a three-furrow Grand Detour plow. This entry won first prize over 35 or 40 entries, getting 81 points out of a possible 100. The next competitor in this class won 77 points.

This same entry also won a special prize for the best steering in classes 8 and 9, best score in depth and width, evenness and covering. Above is W. G. Chilton.

Gray-Dort Merger

THE amalgamation of the Gray-Dort Motor Company, Limited, with the William Gray-Campbell Co., Limited, for the purpose of increasing the production of Gray-Dort cars has been announced.

Robert Gray, who is the head of the two corporations which have been amalgamated, will continue as president of the Gray-Dort Motor Company.

There is a certain element of regret in Gray's dispensing with its carriage business, but we must be alive to the needs of the present day, and move accordingly, said Vice-President W. M. Gray, when interviewed on the proposed amalgamation. "We are convinced that there is a great future for the Gray-Dort car and we have got to give it a chance. Our present plans are to increase production of Gray-Dort cars next year by two and a half times the present production. We have purchased the old Daisy Mill property on William street, adjoining our present motor sales department, on which we intend to build extensions."

The Gray-Dort organization is the outcome of a little blacksmith shop which formerly stood on the site where the Taylor's Mill is now located. It was opened in 1853 by William Gray, shortly after he came from Scotland and settled in this country. The Gray-Dort management prize a photograph of the blacksmith shop which is in their possession.

In 1853 the name of the blacksmith shop was changed to include the sons, Robert and James. Shortly after this William Gray lost his life as a result of injuries sustained in a railroad accident. The business steadily grew and at the age of twenty years, Robt. Gray assumed control of the business. He has been the head of the concern ever since. In 1898 the Gray Company was made into a limited company, and in the year 1911 it absorbed the Manson Campbell Company.

Foreseeing the great future of the motor industry in Canada the Gray-Dort Motor Company was organized in the fall of 1895, which company was controlled by the William Gray-Campbell Company.

HART-PARR IN CANADA

THE Hart-Parr tractor, manufactured by the Hart-Parr Co., Charles City, Iowa, will be sold in Ontario and Eastern Canada, commencing with August, as the John Goodison Thresher Co., announce that they have secured the agency covering the above-mentioned territory. The Goodison sales organization is planning to push the tractor sales this fall, and count on hearty co-operation from the Iowa headquarters. The Goodison Co. will carry at Sarnia, and possibly at Ottawa or some other Eastern point, a considerable stock of tractors and repair parts, and will also have a staff of service men available in the very near future.

The Hart-Parr tractor is rated at 15-30, and the distributors claim that it will develop 18 to 19 on the draw bar, and 37½ h.p. at the belt. It pulls three plows, and is said to have a plentiful reserve of power.

MOTOR PRODUCTS' WINDSHIELD

In the August issue of M.T.I., page 38, a cut of a new Windshield was shown, with the statement that Hyslop Bros. are Canadian distributors. This windshield is manufactured exclusively by the Motor Products Corporation, Walkerville, Ontario, and is sold in Canada by all jobbers who handle automobile accessories.

EIGHT MANAGERS

THE Branch Managers of Beatty Bros., Limited, Manufacturers of Barn Equipment, churns, washers, etc., gathered together at the Head Office in Fergus, Ont., from August 4 to August 7. Sales plans were discussed, and plans were made to extend and improve the firm's service during the coming year.

After the Convention at Head Office was finished, the branch managers paid a visit to the factories in London, Ont., to inspect the new extensions there.

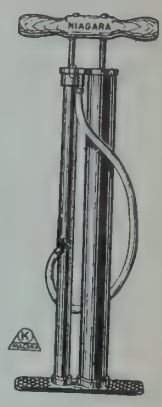
Reading from left to right—Top row: A. S. Walbridge, Montreal branch; J. M. Thompson, Winnipeg branch; D. R. Potter, advertising manager; N. J. Cabeldu, St. John branch. Bottom row: A. K. Freeborn, Vancouver branch; T. A. Farnell, L. P. Winslow, Ontario branch; M. J. Beatty, General Sales Manager.

"NIAGARA" ACCESSORIES

"Niagara" Jacks
Six good models

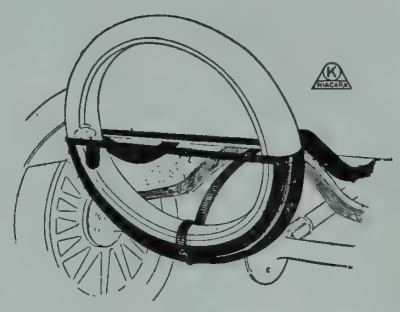
"Niagara" Pumps
Efficient and durable
Chrome leathers used throughout

"Niagara" Bumpers
Every Niagara Bumper is built with shock-absorbing springs



"Niagara" Tire Carriers
The Best Yet!

"Lyon" Resilient Bumpers
Save the car without spoiling the bar



For Satisfaction
Specify "Niagara" Brand to your jobber; or write direct to the manufacturers.

Kinzinger, Bruce & Co., Limited
Niagara Falls Canada

WE GIVE
"Quality and Service"
IN
TRACTOR and TRUCK STEEL CASTINGS
JOLIETTE STEEL CO., LIMITED
903 Read Building, Montreal
JOLIETTE, P.Q.

To Subscribe For This Paper
simply fill in this coupon, pin $1 to it, and mail it in.

"It gives, you hard, cold, liftable plans to make and save more money"

The MacLean Publishing Company,
Toronto, Ontario.

Please send me MOTOR, TRACTOR & IMPLEMENT for one year. Here's $1 to pay for it.

Name .....

Occupation .....

Address .....

A MTI

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

IS

A CANADIAN COMPANY offering service of interest to and in the interest of Canadians.

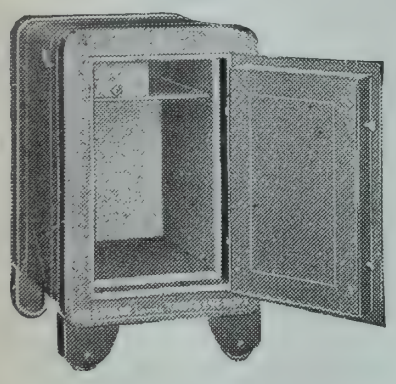
Time payments made possible and profitable for Manufacturer, Dealer and Customer. Of particular interest to Automobile and Musical Instrument Trades.

LET US KNOW YOUR REQUIREMENTS

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

Bank of Hamilton Building, Toronto, Ontario

McArthur Building, Winnipeg, Man.



Protection for Your Victory Bonds, Sales Notes, etc.

The Farmer's Safe

With one of our specially constructed cabinets with combination lock, your money, valuable papers and documents are far safer than when locked in your desk or placed in a drawer.

Every farmer needs one of these made-in-Canada cabinets. They afford you an assurance of safety from loss.

DEALERS—This is a splendid opportunity for implement dealers. Write for prices and full particulars at once.

J. & J. Taylor, Limited

TORONTO SAFE WORKS

Toronto, Canada

MADE IN CANADA

BUFFALO OILS

Quality Oils for Every Farm Purpose

You cannot get the best results in your machinery operations unless you use **quality** oils and greases. The quality of BUFFALO OILS has been thoroughly proven —they are Western Canada's favorite brand.

There's a Buffalo Oil or Grease to meet every requirement of the farm. Put them to the test.

BUFFALO OILS INCLUDE

Automobile Oil	Gasoline Burning Oils
Tractor Oil	Transmission Greases
Gas Engine Oil	Cup Grease
Steam Cylinder Oil	Crank Pin Grease
Machine Oil	Graphite Grease

PRAIRIE CITY OIL CO., LIMITED

Winnipeg **Manitoba**

NEWS— OF THE TRADE FOR THE TRADE

ONTARIO

RENFREW.—G. B. Lindsay has just moved into his large, modern brick garage.

CLAREMONT.—Thomas E. Stephenson, Gray-Dort dealer, has opened a new garage.

SARNIA.—J. E. and H. A. Mavity have purchased the Sarnia Garage from D. Donaldson and Son.

WOODSTOCK.—The Reliance Garage has installed a new style Guarantee Visible Measure pump.

CLAREMONT.—Thomas E. Stephenson has opened a new garage, and is handling the Gray-Dort.

RIDGETOWN.—The Purvis Garage, proprietor Glen Purvis, is now open, opposite the Arlington Hotel.

OSHAWA.—The Ibex Tire and Rubber Co., capitalization $300,000, will locate head offices and factory here.

SARNIA.—The Goodison Thresher Co. has shipped three carloads of machinery to the Argentine Republic.

OSHAWA.—Jackson's garage, a fine, large, two-storey, fire-proof structure, is now completed and ready for business.

AMHERSTBURG.—The Kemp Furniture Co. reports a large business in Fordson tractors among neighboring farmers.

KINGSTON.—E. B. Edwards, speciallist repair man on McLaughlins, has opened a repair shop at 110 Clergy Street, where he will look after all makes.

BRANTFORD.—Robbins and Myers Co., of Springfield, Ohio, manufacturing small motors and electric fans, will locate a Canadian branch here.

SARNIA.—The Lougheed Machine Shop has been purchased by Seagrave, Limited, manufacturers of motor trucks and fire fighting motor apparatus.

STRATFORD.—Magistrate Hunt is grading his tax of speeders according to the number of miles in excess of the limit local autoists are found guilty of.

WALKERTON.—Councillor George Lettner has commenced the construction of his new garage in Jackson Street. It will be 45 by 66, with a brick and glass front.

RENFREW.—Mr. McGarvey, of McGarvey and Decares garage, took unto himself a wife during August, and returned from his honeymoon shortly before we went to press.

OSHAWA.—Motor and motor trucks springs will be manufactured by the Central Spring Co., which is now erecting a factory and expects to be on a production basis next January.

ORILLIA.—George Peacock, since 1912, superintendent of the Tudhope-Anderson factory, has left for Oshawa, where he is taking over the position of factory manager of the Oldsmobile factory.

SARNIA.—Messrs. Hitchcock, Richardson and Greenwood have purchased the Ford garage at 256 N. Christina Street, formerly owned and operated by John W. Harrold. Henceforth, this agency will be known as the Universal Car Sales and Service Co.

BROCKVILLE.—Hutchinson Brothers, boat builders, Alexandria Bay, announce that they wil shortly commence work on a new garage, the building to be completed, ready for operation next spring. The garage will be a fire-proof structure, two storeys in height.

PORT ARTHUR.—L. V. Ashbaugh, a St. Paul publisher, visited this city recently with a distinct novelty on his car —an ice box on the running board, where he kept fresh meat, eggs and vegetables, and even fresh fish, for the delectation en route of the members of his party.

H. E. BURROWS PROMOTED

H. E. BURROWS Motor Truck Representative of the I.H.C. for Eastern Canada, started with the Deering Harvester Company as local agent in Simcoe, Ontario. After a very successful five years in the local trade he was employed by this office commencing in the fall of 1901, as salesman. In May, 1903, he was promoted to the position of blockman with

H. E. BURROWS,
Motor Truck Representative for Eastern Canada.

headquarters at Listowel, Ontario, Transferred a year later from Listowel to Harriston, Ontario, in charge of the northern portion of the London territory, he continued in this position until his promotion to be motor truck representative for Eastern Canada.

Mr. Burrows has spent seventeen and a half years with the I. H. C.

SELLS A DOZEN THRESHERS

E. J. Ramsey, implement dealer at Red Deer, Ata., has had considerable success in the last two years in disposing of over a dozen Stanley Jones small-powered threshing outfits. These machines, which are designed for use by individual farmers, are operated by a gasoline engine, and both engine and separator are mounted on the same wagon frame. The outfit is manufactured at Saskatoon and is capable of threshing 1,000 bushels of oats a day. It sells retail for $1,261, including blower. Mr. Stanley placed this machine on exhibit at the local fair, where it received very favorable comment. He claims that the annual threshing bills will exceed the annual payments on the outfit where the work is done by the large machines which tour the country.

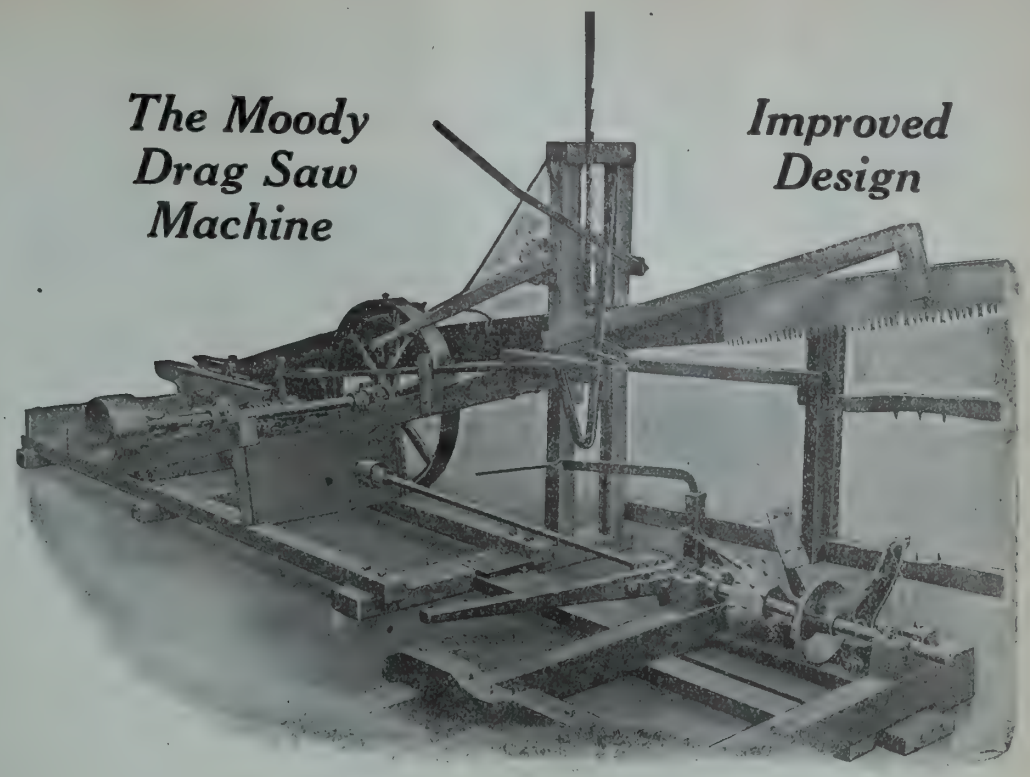
SOLD 275 THRESHERS

Messrs. Francoeur Bros., who have the agency for Western Canada of the Moody Small threshing outfits, manufactured at Terrebonne, Quebec, and with branch offices at Saskatoon, Sask., and Camrose Alta., state that they sold 275 of these machines in Western Canada last year. A total of 300 agents has been appointed throughout the prairies. The machine is manufactured in sizes ranging from 5 to 25 horsepower. It is claimed that it is cheaper for the individual farmer to own one of these machines and do his own work than to employ a threshing machine in the regular way.

MATTHEW MOODY SAWS

Handy, Strong and Durable

First-Class Machines at Low Prices



The Moody Drag Saw Machine

Improved Design

Farmers everywhere are now appreciating the advantage and profit in owning and operating a sawing machine of their own. They can cut their own wood and make money cutting their neighbor's wood, too. DEALERS, here is your opportunity. Sell the well-known Matthew Moody Sawing Machines and reap the handsome profits that always come to the dealer handling a reliable line.

Matthew Moody saws embody all the essential points necessary to attract buyers—practical, convenient, fool-proof, advanced in design and very moderate priced.

The Moody Improved Drag Saw Machine

Recent and ingenious improvements made on this drag saw have made it superior in service to any machine of its kind on the market. By means of a new special device the saw is put to rest and the self feed continues running. No stopping is necessary now in moving the log. There's no inconvenience or delay of any kind. Our pressure lever is another new improvement, which can be used with convenience when required. Still another new and important feature is the log holder. It permits the convenient cutting of short cord-wood without the slightest danger. The whole outfit is made stable and rigid by a still hardwood connecting plank.

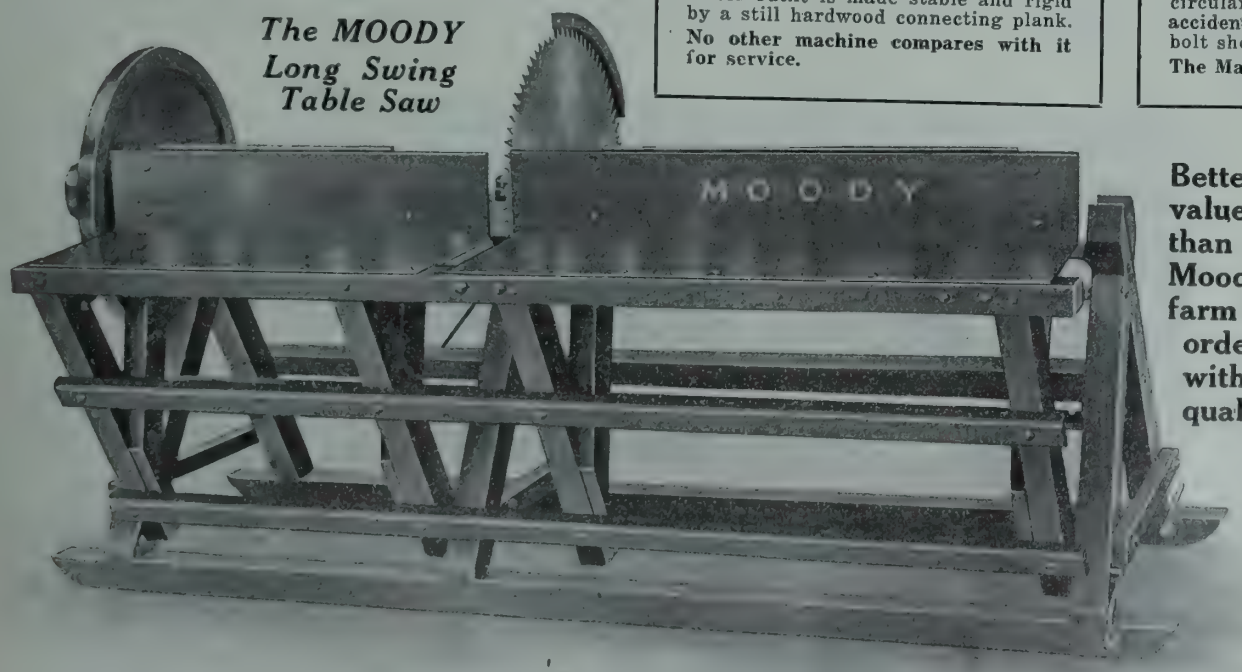
No other machine compares with it for service.

The Moody Long Swing Table Saw

Cutting qualities are not the only essentials to be considered in selecting a good circular saw. Consideration should be given to its safety in operation. This Moody Long Swing Table Saw is designed to be absolutely safe as well as to possess superior cutting qualities. Carefully seasoned hardwood, of ample size and weight, strongly braced and bolted together, give it exceptional strength — no gears, no complicated pieces. Log tables are plated with heavy steel plates and every saw that leaves our factory is equipped with a safety strap around the shaft close up to the circular saw, a precaution against accident in case box of saw shaft or bolt should break.

The Machine could not be made safer.

The MOODY Long Swing Table Saw



Better service and greater value are not obtainable than that represented in Moody saws or other Moody farm implements. You can order a Moody Machine with full assurance of quality, service and value.

Are you acquainted with our full line of machines? Whether you are or not send for our latest catalogue.

MATTHEW MOODY & SONS CO., HEAD OFFICE, Terrebonne, Que.

REPRESENTED IN THE WEST BY

Messrs. Francoeur Bros., Camrose, Alta.
New Home Machinery Company, Saskatoon, Sask.
Mitchell's Hardware Company, Brandon, Man.

Mr. Dealer!

IF

Price
Quality of Material
Workmanship
Close Skimming
and
Easy Turning

are considered by your customers in buying a Cream Separator, then we claim that the

Sanitary King

is the best buy in Canada to-day. Write for prices and terms.

King Separator Works of Canada
Limited
Bridgeburg or Whitby, Ont.

SAYS THE MASTER MECHANIC: The Greb Automatic Grip Puller is a One-Man Puller—Quick-acting, strong and simple in the extreme. May be locked in any desired position. A combination of two or three arms. Heavy Duty Size capacity 1" to 18"—Junior size capacity 1" to 7". Two sets of jaws furnished with each size.

TEN DAYS' TRIAL.—If your dealer or jobber does not have them we will send you one. Try it ten days. If not satisfactory, return to us and we will refund your money. We also make the GREB RIM TOOL.

THE GREB COMPANY, 319 State St., BOSTON

ELECTRICITY ON THE FARM

IF the rate at which folks on the farm are buying electric light plants this year keeps up very long, it will not be very long before electric lights on the farm will be as common as they are in the larger villages and cities. There are very few things that bring so much comfort and satisfaction to home life on the farm as do electric lights. Lighting is not the whole thing, however, for scarcely less important is the use of electricity for operating small motors, as on vacuum cleaners, sewing machines, pumps, washing machines, cream separators, churns, etc., and for ironing, cooking, and many other uses. Electritcity is just another one of those things that, like the tractor, truck and automobile, makes farm life and farm work more enjoyable and worth while for the entire family, and helps to keep the young folks on the farm.

Many companies manufacturing flashlights, batteries and ignition units, are doing considerable advertising in the farm trade papers and this is poor business for the dealer as it makes his clients easily sold on the goods to keep a supply.

Dairy *and* Household Supplies

SHARPLES MILKER CO.

AN important announcement to the dairy trade was made recently when the Sharples Separator Company informed its salesmen and dealers that the Sharples Milker would thereafter be manufactured and sold by a separate company, organized solely for that purpose—the Sharples Milker Company. In this announcement, the Sharples Separator Company states that the milker business has reached such proportions as to necessitate the formation of an entirely separate organization in order to give intensive attention to the present great demand and to provide for future expansion along broad lines.

The Sharples Milker Company's personnel is composed for the most part, of men who built up the milker department of the Sharples Separator Company. Laurence P. Sharples is at the head of the new concern. Mr. Sharples was formerly Treasurer of the Sharples Separator Company. He has with him Messrs. A. L. Knight, C. A. Wickham, I. R. Comfort, Hug Davis, Hughes and many others who were associated with the Sharples Separator Company. It is the intention of the Sharples Milker Company to make no radical changes in the method of handling the milker business—for the present, at least. Dealers holding contracts with the Sharples Separator Company for the sale of the Sharples Milker have been given every opportunity to continue its sale. New dealers will be added.

DAIRY FARMING HAS MANY ADVANTAGES

THAT dairy farming is one of the most profitable and progressive of the agricultural industries is proven by the following facts which dealers should know, and should "talk up" to farmers in their communities:

1. The sale of dairy products furnishes a steady income throughout the year. The farmer who depends upon crop sales for his income usually makes the bulk of his sales during one or two months of the year, while during the rest of the year he has no cash income. Such a system requires long credits in the community.

2. The market for dairy products fluctuates very little year by year as compared with other farm products.

3. Through the return of manure to the land the fertility and physical condition of the soil may be maintained at a high level and crops increased. Even after many years a properly maintained dairy farm has constantly increasing crop yields instead of decreasing ones.

4. In dairying labor may be utilized at a more uniform rate throughout the year than in nearly any other farm business. The grain grower, for example, may have to employ much additional labor at harvest time, but so far as the dairy is concerned the dairyman has about the same duties to perform every month of the year. Thus, less help is required seasonally and permanent employees may be kept.

5. Through the dairy cow many unsalable roughages may be transformed into products from which cash may be realized. Grass, hay, corn fodder and other roughage which may not have a ready sale are economically utilized by the dairy cow. Land which is not suitable for cultivation can be utilized for pasturage for dairy cows.

WASHING MACHINES

THE shortage and scarcity of good household servants and the high wages they are demanding, has made the housewife's task of keeping the family clothes clean her most difficult one. The washing machine for household use points the way—the cheapest, the most economical and the most sanitary—to keep family clothes in homes where servants are employed and in homes where there are no servants, either because they cannot be secured or because they cannot be afforded.

For the housewife who has always done or had the family washing done at home, the washing machine is indispensable because it does the work quickly and cheaply and, if a servant is employed, it helps to keep the servant satisfied with her position.

A Board of Health report states that, as a rule, clothing washed at home receives a good deal of care and attention and that the danger from infected linen—washed and ironed in the home—is negligible. This is a most important point in favor of having the washing done in the home especially at this time, when epidemics of influenza and infantile paralysis have been so prevalent in both rural and urban communities. When clothes are washed and ironed in the home of the family wearing them, they are not washed in the water with clothes from other families; they do not come in contact with either dirty or clean clothes from other families; and the washing can be supervised so that no diseased person will be permitted to do the work; and so that proper application of disinfectants, soap, water and heat can be made to destroy all vermin and pathogenic organisms. When the washing is done at home, the housewife can select a clean place—free from vermin—in which both the washing and ironing can be done.

The life of the clothes washed at home by machine is much longer than the life of clothes washed away from the home.

Rates for doing the family washing away from the home are too high when compared to the final cost of doing the washing at home by machine where the clothes—without much work—can be given the care and attention they deserve.

Where electric power is obtainable, one can argue very effectively for a power machine. Even the modern hand machines save a tremendous lot of rubbing.

WATCH FARM PAPERS

Every implement agent and accessory dealer should scan the advertising pages of the farm papers for pointers as to the probable demands from farmers. Any advertised product is sure to create demand and the farmer is likely to remember this when he visits your shop. Seeing the article on display whets his curiosity at once and a sale is easily closed.

Good belt power facilities greatly enhance the value of a tractor. The farmer who schemes a little can find many uses that will make his tractor investment bring bigger returns. Southern men are using the Hart-Parr 30 to run portable sawmills and rock crushers. The Hart-Parr 30 in the picture is owned by J. E. Thackston, Greenville, S.C. He has discarded his steam engine and boiler and the Hart-Parr 30 is stripping off a 16-foot board every 30 seconds with a 46-inch Disston saw.

Tire Guarantees Futile?

GUARANTEES don't make good tires. A tire company with a good "rep." will sell good tires —and without a guarantee. This is what *Motor World* thinks, and the trade is out for relegating all tire guarantees to the scrap heap. It says:

Let's Have—

NO MORE TIRE GUARANTEES

1.—Let's Cut It All Out.

2.—Do a Better Business.

3.—Sell Tires on Merit Only

As we go back to business let's go back RIGHT.

Let's do some things we never did before and quit doing some of the things we have done for years.

As a starter, *let's cut out the guarantee nuisance on tires.*

The guarantee has outlived its usefulness. It was useful at a time when tires, cars and everything allied was new and the purchaser wanted some assurance that he would not get stung. Under those conditions the better makers instituted the tire guarantee.

And just because the thing was started it is being kept up.

But—ask the first man you meet on the street what he thinks of tire *guarantees* and see what he says. Either he doesn't know much of anything about it or else he probably is unqualifiedly against it.

There is no more sense in a reputable tire company guaranteeing a tire for 4,000 miles than there is in a shoe maker guaranteeing a pair of shoes for the same distance.

A TIRE is either good or it isn't good. If it isn't good it can't get by at all, and if it is good it doesn't need any guarantee. *A guarantee can't make a tire.*

A good tire, made by a good company, and sold by a good dealer will give the buyer far more miles than the guarantee covers—if the user has any sense on the tire question. The average man will get nearer 10,000 than he will 3,000.

BUT—along comes some wild, reckless driver, whose idea of motoring is to see how near he can come to scaring the rest of the world to death. Taken collectively, he can ruin tires faster than the tire companies can guarantee them. He skids around corners, slaps on the brakes to make up for his reckless speed, drives carelessly over bumps and rough roads—and then *DEMANDS an adjustment because his tires don't last.*

WHO PAYS?

The tire company? No.

The dealer? Not directly.

Who then? *The man who is careful of his tires. He pays for the guarantee that is given to the reckless driver.* To protect itself against the mad motorist the tire company has to add to the price of the careful user's tire.

And when it comes to a kick *the hardest kicker gets the best adjustment.*

How much better it would be if tires were sold as other good merchandise is sold!

You would eliminate the grief of adjustments. You would avoid the chance of losing friends and customers. If YOU sold a GOOD tire, and if people bought of you because you have a GOOD REPUTATION that would develop a sweetly running business—and make money at it.

When you go to a hat store you buy a hat and never think about a guarantee. If anything woefully wrong develops you go back and—if you bought from a good dealer—you get satisfaction. But you never worry over how long the hat will wear. You WEAR IT OUT AND BUY ANOTHER.

You buy gloves—as GOOD GLOVES. If they rip too early and it isn't too much inconvenience you go back and get them sewed up. If you kick hard enough a good dealer will give you a new pair, yet you have a sneaking idea you are unreasonable when you DEMAND A NEW PAIR.

YOU buy shoes—AND FORGET HOW LONG THEY WEAR so long as they don't show defects and go to pieces too early. *You buy them because you have confidence in the shoe and the dealer.*

You buy clothes of dealers in whom you have confidence. If the suit isn't satisfactory the tailor makes it satisfactory. But does he say anything about a guarantee? Or, do you ever think to ask for one?

When a shoe man, or a tailor, or a hat man, or any other man, begins to talk about "guarantees" you begin to wonder WHY HE HAS TO GUARANTEE HIS GOODS—*and how much extra he charges for his "guarantee conversation."*

One of the things badly needed to make the automotive business a real business and put it on the plane where it belongs, is the elimination of this "guarantee stuff"—which amounts to nothing except trouble.

Guarantees mean nothing but trouble *—and trouble costs dealers real money.* The dealer who has sold a guaranteed tire has taken a first step in a career of worry. He is between the devil and the deep sea—the customer and the factory; if the customer kicks and the factory doesn't see fit to adjust the dealer is in a mess.

Let's cut it all out. Let's sell tires on their merits.

If serious troubles develop and it is obviously the fault of the tire, make good in some way.

Let's make tire selling a real business, with real goods sold in a real way.

ARE YOU FOR IT?

STILL GOING UP!

WORD has come from Detroit that a general increase in the prices of automobiles may be expected soon, the increase to put the market for automotive vehicles of all kinds on practically the same basis as it was when the war stringency was at its peak. The date fixed for this increase is some time in September. Already some seven or eight of the car makers have added from $90 to $200 to their list prices in the States, and this means a corresponding increase in Canada. Truck manufacturers, it is predicted, must follow suit, according to the best informed ouinion in Detroit. As yet no appreciable increase in truck prices has been made, but it is inevitable, when certain circumstances are taken into consideration. A short time ago one of the largest axle manufacturers notified its customers that it would make a ten per cent. increase on car axles at once, and a five per cent. increase on truck axles. Other parts are also soaring, and it must be remembered that there are few of the American cars which are made wholly in the plant which gives them their name. Even the largest cars are often assembled for a considerable extent, and though a car may be practically a complete output from one factory, it is nevertheless dependent on standard manufacturers for certain parts used. Such a small part as a hood clamp, which is a piece of metal about six inches long, with little or no milling required to produce it, once cost 18 cents. Now it brings 42 cents.

The position of the steel market is still uncertain, although improving rapidly. Steel prices, however, are going up instead of down, as many companies hoped. While the increase is slight, it has been sufficient to bring many concerns into the market who were holding out for a price drop. Labor costs are also higher all over the automotive industries.

The demand for cars continues without abatement. Factory output is limited in spite of every effort to reach capacity production. The demand is apparently greater for the larger cars than it was a short time ago. Limitation of production, particularly on the closed cars, is due to scarcity of bodies, and the high price of body materials. There is also a growing export demand for the American car, all of which means that the price of the automobile is bound to soar instead of drop.

Hindview

AUTO MIRRORS

Style A--For Smaller Cars

MADE IN DETROIT USA

Style A--Long For Larger Cars

Style D---For Trucks

Style F--For Front Fenders of Cars or Trucks

The "Hindview" Auto Mirror prevents acidents by enabling the driver to keep an eye on the rear traffic without losing sight of the road ahead. Our Ball Joint allows immediate adjustment to any desired angle without the use of any tool.

Substantially made—nicely finished—has five inch plain, or lens, plate glass mirror. The lens mirror increases the field of vision about 50 per cent. without distorting the view. Note large firm clamp for attaching to windshield.

Write for our folder showing complete line

We are manufacturers of SHEET METAL STAMPINGS to order, such as Washers, Shims, Card Holders, Light and Medium Weight Drawn Work.

WRITE FOR OUR CATALOGUE

KALES STAMPINGS

KALES STAMPING COMPANY

446 West Lafayette Blvd. Detroit, Michigan

Lubricants of Quality

A LITTLE GOES A LONG WAY

HARRIS

TRADE MARK-REG U.S. PAT OFF

OILS AND **GREASES**

AND EVERY DROP COUNTS

HARRIS TRACTOR CYLINDER OILS

MADE IN FOUR GRADES

HEAVY, EXTRA HEAVY, SPECIAL AND EXCELLO

from Premium Pennsylvania Crude by a careful process to meet the exacting conditions of the Tractor Motor---HARRIS OILS have a high fire test and are very viscous. One of the four grades above listed will properly lubricate any Tractor---HARRIS OILS have been on the market for over 35 years and have won the distinction of being

AMERICA'S LEADING LUBRICANTS

Write for Prices and Booklet

A. W. Harris Oil Co.

326-328 South Water St.

PROVIDENCE, R.I.

YES, I HAVE IT!

Who will be able to say this, you, or the other dealer in your district, when asked for

GASTINE

the Gasoline Economiser *in tablet form*

You WILL *be asked for it.* A big demand is steadily growing. In the city of Montreal alone over 5000 motorists are already enjoying the benefits of

GASTINE THE ONLY PRODUCT OF ITS KIND WHICH HAS SUCCESSFULLY LIVED UP TO EVERY CLAIM MADE FOR IT BY THE MANUFACTURERS.

All the best hardware and accessory dealers are handling and recommending it after severe tests as to its merits.

GASTINE has been positively demonstrated to effect a

30% Reduction in Gasoline Costs

at the same time preventing formation of carbon, assuring easier hill climbing ability, faster ignition and greater power.

DEALERS are enthusiastically writing for increased supplies. They wish to cash in on what they see to be AN ASSURED SUCCESS.

GASTINE is harmless and efficient, has been tested by Milton Hersey & Co., Limited; endorsed by National Ford Owners Club, Inc., N. Y., U. S. A.

Retails at $1.25 per box containing 100 tablets. A liberal discount to dealers leaves you a good margin of profit. A few more *EXCLUSIVE AGENTS* can be established on most attractive terms.

WRITE FOR YOUR AGENCY TODAY TO

ROBERTSON AND MURPHY
Limited
Coristine Building, Montreal

Car Owners Want Real Service Accessories

"WHILE it is usual for the manufacturer to equip his car with everything that is needed to make the car run, there are certain very important accessories which most cars do not possess when they arrive in the owner's hands." said a Toronto auto dealer recently. "Some new car drivers wait until the time comes to use such an accessory before they think about the real need for it, but the wise buyer will at once equip with the essential things.

"First among those come tire chains for driving in rainy weather and on slippery streets. Some cars are already equipped with these, but they are few. Before the car is driven away from the dealer's show rooms there should be a set of skid chains in the tool compartment. Next to the chains comes the jack. It is quite possible that the jack supplied is one that will work more than once, but usually the very cheapest sort is supplied. If the one furnished is not of the best sort it will actually pay to get rid of it and buy the best jack made. While it is not fair to anticipate tire trouble with a new car, there is such a thing as a tack or nail, and they make no distinction between new and used tires. A rim operating tool is the next essential and with it comes the vulcanizer. In other words, tire equipment, even though new, should be considered as a potential trouble maker. The rim tool makes it easy to detach the rim from the tire, the vulcanizer makes a tube patch a matter of a few minutes. A tire repair outfit will naturally suggest itself with the vulcanizer and above all a tire gauge.

"The dealer inflates the tires enough to run the car, and few of them pay much attention to the right pressure. It is up to the owner to get the right pressure into the casings, even though the run to the home garage is only a matter of a few miles.

"THE average motorist locks the door after the horse is stolen, he thinks about car insurance after he gets the car. It would be interesting to find out how many brand new cars are removed from garages. The wise buyer will have complete insurance before he gets his car from the dealer. The latter, in most cases, is in a position to take care of the whole matter, charging no more than standard rates. If the dealer will not attend to it, it should nevertheless be done before the car is delivered, so that an accident or fire on the way home will not mean a loss to the owner.

"With practically all laws requiring some form of head lamp glare remover, many factories are fitting special glass fronts as standard equipment, but still a greater number of cars come through without such equipment. I have known owners to be stopped by traffic officers, before an opportunity was afforded to purchase suitable nonglare fronts. In cases where the factory does not supply such devices the dealer will be glad to fit new lenses of any make.

"In these days car thefts are numerous, and while theft insurance protects the owner, there is no assurance that a new car will be forthcoming within a reasonable time. The automobile factories are so busy supplying the tremendous demand that it is very difficult to get delivery of a car before two weeks, in many cases two months. A good car lock, while it may cost $10 or $15, is worth the price. Car thieves have a particular liking for new cars, but a suitable lock, such as a transmission lock or a steering wheel lock, will do much toward keeping the thief away.

"A STORAGE battery hydrometer is a most important piece of equipment which may have immediate use. It should be used the day the car is received and in warm weather should be used to test the storage battery cells every week. Many storage batteries have literally been 'shot to pieces' in the first month of use because of lack of attention to water filling and testing.

"Tool equipment in the average car is sorely lacking in quality. The cheapest kind of wrenches and pliers are supplied. I know a great number of owners who use the equipment set merely for spares around the garage, purchasing a good usable set for the car

"Among others, a spotlight is a useful addition to the car's equipment, though not as essential as some of the others previously mentioned. In the same class with the spotlight comes body polish and car cleaning paraphernalia, especially a compound which will remove road tar. Nothing is more disheartening than to bespatter a new body with road tar, which, by the way, must be removed within a few hours or it will leave indelible marks."

Maybe Adam Laughed At These!

We Wonder Where.—"Can you tell me, Johnny," asked the fair young teacher, "where shingles were first used?"

"Yes'm," answered modest Johnny, "but I'd rather not, ma'am."

* * * *

Mother the Skittish One.—An old lady from the country and her small son were driving to town one day, when a huge motor car bore down upon them. The horse began to prance, and the old lady jumped out of the buggy, screaming at the top of her voice. The chauffeur stopped and offered to help.

"That's all right," said the boy composedly. "I can manage the horse. You just lead mother past."

* * * *

Some Salesman.—"Father," called the dairyman's wife from the back porch, "that cream separator salesman is here."

"All right," was the response, "you talk to him the first lap, then let Mary Ellen talk the second lap, John the third, and when you've all been worn out, call me and I'll write out the check."

And still I bet you cannot say: Is't Chevrolet? or Chevrolet?

* * * *

Was It a Joke?—Mr. Jones had recently become the father of twins. The minister stopped him in the street to congratulate him.

"Well, Jones," he said, "I hear that the Lord has smiled on you."

"Smiled on me?" repeated Jones. "He laughed out loud."

* * * *

It Made a Difference.—He was a very small boy. Paddy was his dog, and Paddy was dearer to his heart than anything on earth. When Paddy met swift and hideous death on the turnpike road the boy's mother trembled to break the news. But it had to be, and when he came home from school she told him simply:

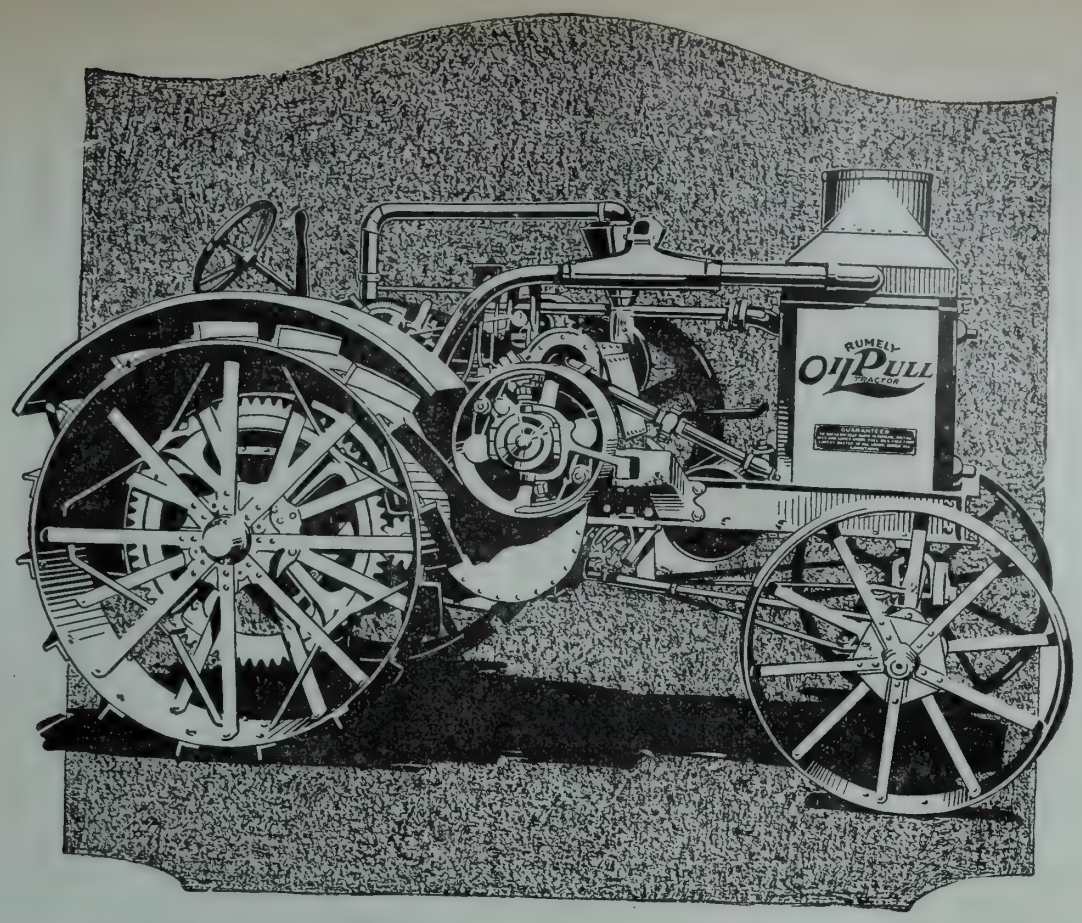
"Paddy has been run over and killed."

He took it very quietly. All day it was the same. But five minutes after he had gone to bed there echoed through the house a shrill and sudden lamentation. His mother rushed upstairs with solicitude and pity.

"Nurse says," he sobbed, "that Paddy has been run over and killed."

"But, dear, I told you that at dinner, and you didn't seem to be troubled at all."

"No; but—but I didn't know you said Paddy; I thought you said Daddy."



The New 12-20
RUMELY OILPULL TRACTOR
LA PORTE IND.

Cheapest in Cost per Year of Service

What kind of a tractor do you want to sell—one that is cheap in price and necessarily cheaply and lightly constructed, or one whose value is measured by its years of service—one that will be sitting in a fence corner within a year or two, or one that will be serving its owner faithfully for many years, and building a reputation for itself and yourself?

Which will develop the better future business for you?

Advance-Rumely is one tractor manufacturer who insists upon putting quality first. By quality we mean rugged dependable construction, surplus power, real fuel economy and all around service. Nowhere in the tractor industry is quality better proved than by the performance of the OilPull during the 10 years it has been on the market. The first ones built are still delivering the goods.

In building the new 12-20 OilPull Advance-Rumely refused to put out a cheap, lightly constructed tractor. We know and you know that durability can't be combined with cheap light construction. And if a tractor won't "stand the gaff" nothing else about it counts for much.

The proved OilPull ruggedness and substantial construction is preserved in this small light-weight 12-20. By light-weight we mean *right* weight, the proper weight to live long lasting, year after year, dependable service.

A written guarantee backs the 12-20 to burn successfully all grades of kerosene under all conditions, at all loads to its full rated brake horsepower.

And it has plenty of surplus power. The 12-20 rating is based upon only 80% of its maximum power efficiency—a 20% overload capacity when you need it—a further insurance of long life.

The 12-20 is oil cooled—there's no evaporation—the radiator can't freeze—the circulating system is always open—oil preserves the metal parts. The OilPull oil cooling system keeps the OilPull motor at the right temperature at all loads—the harder the OilPull works, the cooler it runs.

The 12-20 OilPull pulls three 14-inch bottoms under ordinary conditions and a proportionate number of disc plows. It operates a 22-inch thresher fully equipped and economically handles all other power jobs, drawbar or belt.

To safeguard your customers' best interests Advance-Rumely maintains 27 branch offices and warehouses, each equipped to give immediate service in machinery, parts and expert help.

The wise farmer will buy a tractor by the year, not by the dollar. Just as the OilPull will plow an acre at lower cost than any tractor built, its cost measured in years of service makes it the cheapest tractor obtainable.

The OilPull line is complete—four sizes—a line upon which a permanent and profitable tractor business can be built. Full details upon request.

ADVANCE-RUMELY THRESHER CO., *Inc.*
La Porte, Indiana
27 Branch Offices and Warehouses

The Sweetness of Low Price never equals the Bitterness of Poor Quality

Fuel — Guaranteed to burn kerosene successfully under all conditions.
Cooling—Oil cooled—no evaporation—non-freezing.
Motor—Heavy duty, 2 cylinder 6 in. x 8 in.—560 R. P. M.
Crankshaft—Built to U. S. naval specifications.
Frame—Hot riveted steel members—no bends—no splices.
Transmission — Cut steel gears — enclosed and running in oil.
Bearings — Hyatt roller bearings in transmission and rear axle.
Governor—Fly ball throttling type—automatic speed regulation.
Belt Pulley—19 inch diameter—running directly off crankshaft—no intermediate gears.
Lubrication—Force feed and splash.
Speeds — Two forward — one reverse.
Drawbar—Adjustable spring drawbar.

ADVANCE-RUMELY

CANADIAN Motor Tractor and Implement Trade Journal BUYERS DIRECTORY

This directory will help you with your buying and your planning. The advertisers listed here are thoroughly reliable and leaders in their respective fields. They are looking for live, wide-awake representatives. Study their advertisements carefully because they contain valuable information which will dovetail with your plans. We are glad to go to the trouble of arranging this list—to make it easy for you to select new lines. If it so happens that what you want is not here, write us, and we will tell you where to get it.

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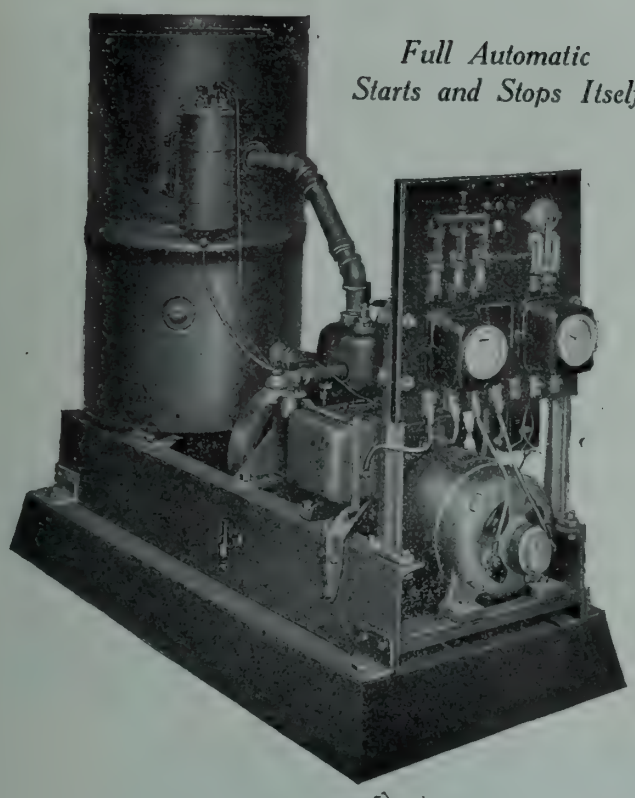
Every Farmer is Your Prospect when You Handle

Northern Electric
Power and Light



Full Automatic
Starts and Stops Itself

FARMERS now want more than a Light plant---They want POWER and the type best suited to their individual needs.

Some want a belted plant, others a direct-connected or perhaps will require a 110-volt plant. The Northern Electric line comprises all sizes and types.

The plant shown here represents the highest development of electric plants for individual use. It is fully automatic. The Storage Battery is used for all ordinary house and barn lighting but whenever an excessive load is connected or the battery becomes 15% discharged, the plant automatically starts to recharge without even pressing a button and stops again when the battery is recharged. Other types and sizes have many valuable features making them the best of their kind.

Wide-awake business-getting dealers can make the selling of these plants the most important and profitable part of their business. Protect your territory by mailing the coupon today.

Northern Electric Company
LIMITED

Montreal
Halifax
Ottawa

Toronto
London
Winnipeg
Vancouver

Regina
Calgary
Edmonton

D2

Northern Electric Company Limited

Send me dealer details of Northern Electric Power and Light.

Name .....

Address .....

CHAMPION "X"
for Ford Cars
A-15, ½ inch
Price 90c

CHAMPION "O"
for Overland Cars
A-14 "O" ½"
Price $1.00

CHAMPION
"STUDEBAKER"
for Studebaker
Car
A-13 ½"
Price $1.00
A-13 ⅞-18
for truck, tractor
and farm engines.

CHAMPION
"MAXWELL"
for Maxwell Cars
A-44 ⅞-18
Price $1.00

Champion

Dependable Spark Plugs

Have satisfaction, service and economy "built in." That is why Champions are factory equipment on four out of every five gasoline motors and engines in use and why they offer the greatest sales possibilities to the dealer.

These "built in" qualities are due to the superiority of our 3450 Insulators which have a far greater breakage resistance to shock, vibration and sudden temperature changes than our best previous insulator.

And to our patented, asbestos lined gasket construction which absorbs expansion from heat and prevents compression leaks.

Every type of Champion sold is backed by our guarantee of "Absolute satisfaction to the user or full repair or replacement will be made."

Build your Champion sales on these facts and on the comprehensive plan of advertising that is being carried on for your benefit. It means bigger accessory business and more profits for you.

Look over your stock to-day and order from your jobber the Champions you need.

Champion Spark Plug Co., of Canada, Limited

Windsor, Ontario

CHAMPION "BUICK"
for McLaughlin Cars
A-53, long ⅞-18
Price $1.00

"AERO" TRUCK
JAS-43, ⅞-18
Price $1.00
for trucks, tractors and marine
engines

HEAVY STONE
B-13 ½" B-43 ⅞-18
B-53 ⅞-long
Price $1.25
Ball terminal furnished when
specified, otherwise regular
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The editors of MOTOR, TRACTOR AND IMPLEMENT go out into the field, all over Canada, calling on dealers in automobiles, automobile accessories, tractors and farm implements. They interview thousands of successful dealers from Coast to Coast. They find out how each man makes his business pay. They ferret out pet money-making plans.

Then —

This information is boiled down and handed out to you each month in the pages of MOTOR, TRACTOR AND IMPLEMENT.

Little wonder implement dealers and automobile dealers and tractor dealers welcome this *new kind* of a trade paper, when through it they see how other dealers organize their work — how they make sales — how they hold down credits — how they keep track of stock, and expenses — how they figure out what lines pay best — how they look ahead and plan next year's work — in brief, just *what* they do to make their business more profitable, *how* they do it, and *why!*

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Winter is the time to make Big Money selling farm lighting plants

NO matter what other lines you are selling to farmers, winter is more or less a dead season. But the man who handles the Phelps Light and Power Plant reaps his big harvest in the Fall and Winter. The farmer has time to talk to him. Nights are long and dark—the value of electric light is more emphasized. The farmer has time to get the job installed—no excuse for "putting off" a deal. And above all, he has MONEY—the cash which he has realized on his crop. Now is the time and the big opportunity for live men to jump into the farm lighting business and to make real money.

If you've been selling cars all summer, or farm implements, or supplies of any kind—now is the time to make another call on your customers with a real money-maker.

And a proposition that creates **constant repeat sales.** For the farmer who installs electricity soon begins to buy washing machines, toasters, irons, fans, small motors, more wiring, more belting. And he'll be mighty interested in our Westco Automatic Pump driven by electricity—gives him a constant supply of running water.

Look at the proposition from any angle you like—

—As a money-maker for dead seasons
—As a line with real talking points
—As the fastest-selling farm specialty on the market
—As a big profit-maker coupled with repeat business
—As a business opportunity

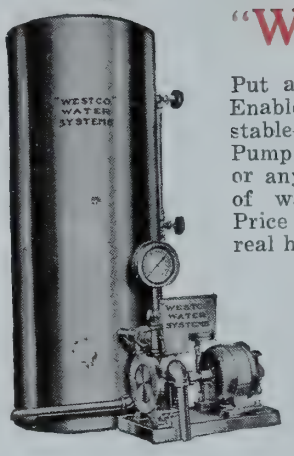
—and you'll agree that it is worth while to get into the farm lighting plant business—and to get in it on the ground floor **with the right plant!**

Join Our Team---Get Busy Now---Cash In On Our Tremendous Advertising Campaign

The talks we've had at the Canadian National Exhibition and at the different Fall Fairs have not only closed a big bunch of sales, but a big bunch of territory. Men who want to join our live organization of dealers, who want to be associated with a big concern giving real help and service to dealers in a big dominating way, will have to act quickly if they want the best and most profitable territory.

Take a glance at our propositions as outlined here. Note that there's an electric plant to fit any needs. Note that we've a farm specialty outfit to make almost every call a sale.

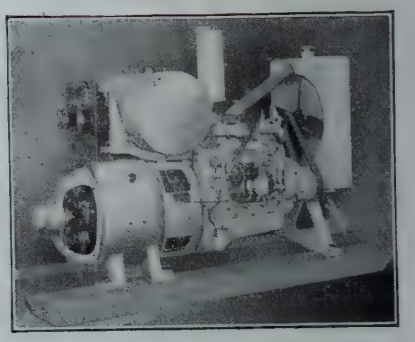
It will take five minutes to write us a letter. It may be the most profitable five minutes you ever put in in your life. Act now. We'll give you a prompt and full reply.



"Westco" House Water Systems

Put an end to the old pump—the bugbear of farm life. Enable the farmer to have running water in the house or stable—to have a modern bathroom. The Westco-Automatic Pump runs from ¼ h.p. motor—connected with the PHELPS or any other electrical service. Delivers 200 to 400 gallons of water an hour. Automatically. Needs no attention. Price is right! We specialize on pump problems—give you real help and advice in selling pumps.

Langstadt-Meyer Generating Sets



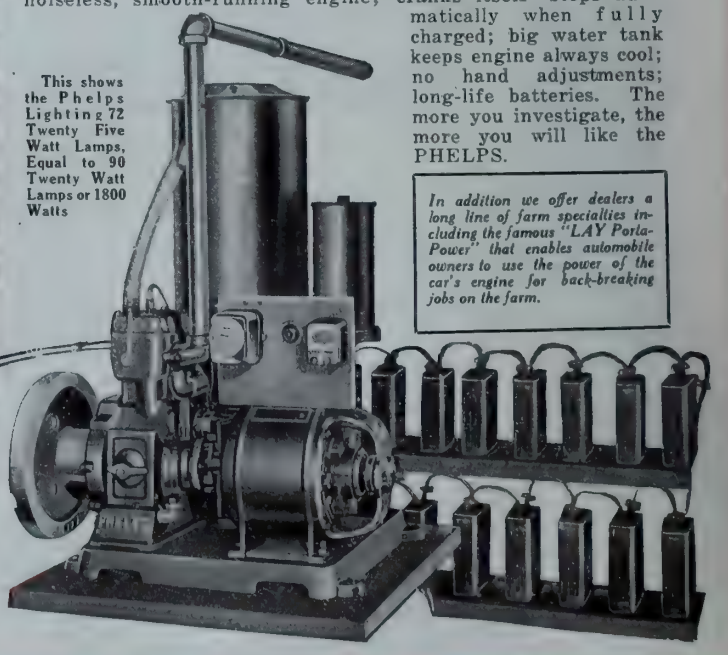
A large capacity electric light plant—from 150 to 400 light capacity—to meet the needs of Hotels, Churches, County Estates, Dance Halls, Schools, Villages, Factories, Garages, Moving Picture Theatres, Amusement Resorts—wherever there is need for a big, dependable lighting system.

Anyone familiar with automobile or gasoline engines can run it. It is scientifically designed to be simple, compact, reliable and of medium weight. Runs at low speed—has long life and low maintenance cost. With this plant you can solve any lighting problem requiring more than the extra-big capacity of the Phelps.

The Phelps Light and Power Plant

The best buy in electrical plants on the market—because it gives twice the power and twice the light for practically **the same money.** Ordinary plants are rated at 750 Watts—the PHELPS at 1500! And in addition it has the exclusive feature of a POWER-PULLEY that enables the farmer to use the 3 h.p. engine for **direct** power as well as electric power. Other big selling points are: a positive oil-feed—that means noiseless, smooth-running engine; cranks itself—stops automatically when fully charged; big water tank keeps engine always cool; no hand adjustments; long-life batteries. The more you investigate, the more you will like the PHELPS.

This shows the Phelps Lighting 72 Twenty Five Watt Lamps, Equal to 90 Twenty Watt Lamps or 1800 Watts



In addition we offer dealers a long line of farm specialties including the famous "LAY Porta-Power" that enables automobile owners to use the power of the car's engine for back-breaking jobs on the farm.

GRACE MOTORS, Limited

Largest Distributors of Trucks and Farm Specialties in Canada

243-255 Queen St. East, Toronto **236 Main St., Winnipeg**

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TRADE JOURNAL

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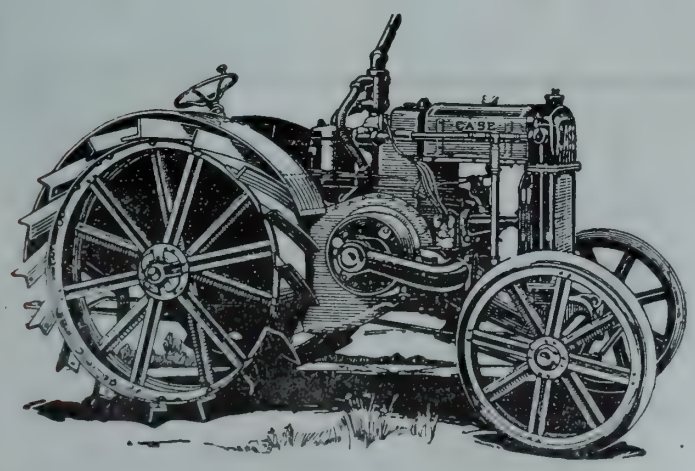
Kerosene Tractors

---dominate in power---dominate in scope of work performed---dominate in economy.

Case Kerosene Tractors are the result of years of experience by practical tractor builders, and bear a reputation that means sales easily made.

Be a Case dealer and benefit by all this.



The Canadian Fairbanks-Morse Co., Limited

Halifax, St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria.

Prevent Waste of Gasoline and Oil

By constant outward pressure WedgeRite Piston Rings adapt themselves to the shape of the cylinder walls. They completely fill all grooves and automatically take up all wear. They prevent the waste of gasoline and oil---cut down carbon and deliver more power.

Note the Three Rings

An inner wedge-shaped ring exerts an outward pressure forcing two outer rings apart both in width and diameter. That is why WedgeRite Rings are *always* tight.

MANUFACTURED BY

WedgeRite Piston Ring Company, Limited

92 Notre Dame Street East, Montreal

CANADIAN SALES AGENT:

DONALD F. JOHNSTON

TORONTO WINNIPEG MONTREAL

"Avery" Tractors

(SEVEN SIZES)

Have met the tests of actual field use continuously in the hands of owners and have proven themselves invaluable from the standpoint of fuel economy, durability and easy adjustments and repairs.

When you sell the Avery you sell a **tractor that has a reputation for making good**—and you sow the seed for a quick-growing tractor sale.

All sizes of Avery Tractors have the same exclusive features that you will find in any one of them—the motors are of the opposed low speed type, with valved-in head, extra strong crankshafts, **renewable inner cylinder walls,** adjustable main bearings and patented gasifers to burn low grade fuels. They all have the Avery "Draft-horse" Perfected Opposed Motor and the Avery "Direct-Drive" Patented Sliding Frame Transmission.

The Agent handling the standard general utility tractor--the Avery 8-16--is bound to get the business. Quoted for Fall delivery at less than $1,000.

Lister
POWER ON THE FARM

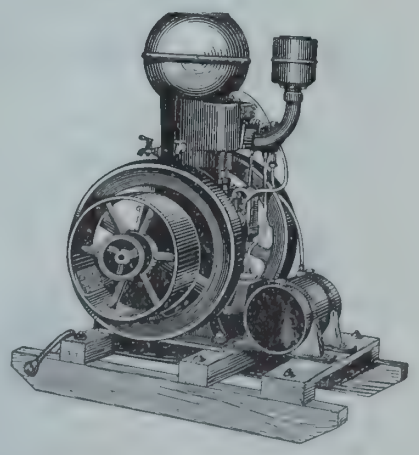
May we send you full details re our big money-making agency proposition?

Other Lister Lines

Lister Engines. Easy to operate and economical. The quality ensures a long, reliable service.

The Lister Milker has never been beaten in competition. Milks like the calf—**the cows like it.**

Melotte Cream Separators — the original Belgian made machines—a machine unequalled for skimming efficiency, ease of operation and long life.



R. A. LISTER & CO. (CANADA) LIMITED

58-60 Stewart Street, TORONTO -:- **Also at Wall Street, WINNIPEG**

Made in Canada

DIXIE "ACE"

Brings

Dollars to Dealers

Everyone is talking about the DIXIE "ACE"—it is the "Latest and Greatest Tractor Success." It sells easier, because it fills the requirements of the average farmer better than they have ever been filled before.

The neat, graceful lines—compact, sturdy construction—and startlingly sensible service features appeal to the ordinary average farmer—the hundred-acre man, who forms 98% of the farming community. Every farmer is a prospect for a DIXIE "ACE."

The DIXIE "ACE" weighs 3,350 lbs.—has a 69″ wheelbase—a speed range of 1 to 6 miles—all gears entirely enclosed running in oil—wonderfully efficient drive wheels of new and exclusive design—comfortable cushion seat and roomy covered cab—plenty of power for any farm—and the price is so reasonable that there is hardly a farm in Canada on which it would not be an investment paying the highest dividends.

Turn this over in your mind—why shouldn't you be the man to reap this golden harvest? If you are an aggressive dealer, of good local standing, write us TO-DAY. Act quickly as the season is just starting.

GILSON ENGINE

"Goes Like Sixty"

Are you making as much money out of your engine sales as you should? Are you selling as many engines as you should? Let us show you how to increase your engine sales and your Bank balance. Write to-day for our agency proposition.

SILO FILLER

The Wonderful Gilson

The Lightest Running Blower Cutter made

The supremacy of the Gilson Silo Filler is unquestioned. It does what has heretofore been considered impossible. Do not be satisfied to sell a substitute and only get a fraction of the silo filler business from your territory. Write for our special free sample plan whereby you can get all the silo filler business in your locality—and there is probably a great deal more available than you realize.

HYLO SILO

The Mortgage Lifter---

The Money Maker

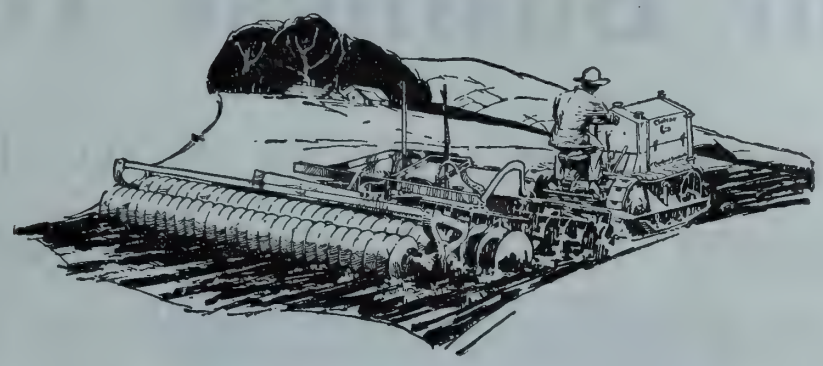
The "Hylo" is different and distinctly superior to any other silo. The hoops automatically expand and contract with the silo—patented, combination door lock and ladder—reinforced door frame—positive anchoring system—our own wonderfully fine grade of Imported Long Leaf Yellow Pine is used. Your customers want the "Hylo"—sell them what they want and make more money.

GILSON MFG. CO., Limited,

Dept. A, - GUELPH, ONT.

351 Elgin Ave., WINNIPEG, MAN.

The Tractor of Tomorrow Here To-day



Year-'Round Service---Year-'Round Sales

The tractor that the farmer is looking for is the one that he can use the greatest possible number of days each year.

Thousands of building contractors, road makers and factories must have the same kind of tractor to overcome labor shortages.

Because the Cletrac meets this need, both for the farmer and for the industrial user, it makes an ideal year-'round selling proposition for Cletrac dealers.

The Cletrac is not only supreme in the *variety* and *quality* of the work it does, but is the tractor that is built to stand up and do its work under the most difficult conditions.

And, while having the power and the stamina to carry it through the grind of heavy work, it is small enough for economical use on the lighter tasks of either draw bar or belt.

In the Cletrac you will find the tractor you have wanted to sell—the tractor your customers have waited for.

We have a most interesting book which goes into detail regarding the Cletrac selling plans and opportunities. This book is called "Sale Quality in Tractors" and your copy will be sent on request.

The Cleveland Tractor Co.
of Canada, Limited
25 Hydro-Electric Bldg., Windsor, Ont.

The Largest Producers of Tank Type Tractors in the World

Cletrac

TANK-TYPE TRACTOR

Fire Prevention is a Factor in Your Business To-day

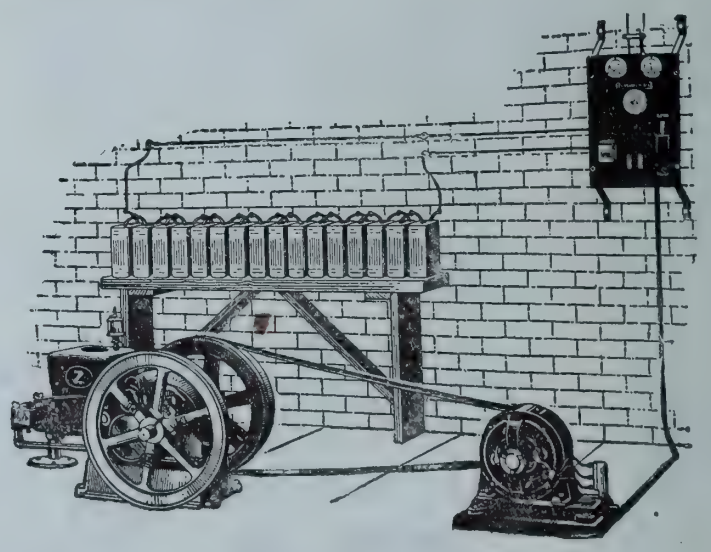
SHOW your customers how they can safeguard their homes against that ever-present danger from fire and you will make sales that mean genuine profits.

Fairbanks-Morse Electric Light Plants

mean a greater measure of safety to the farm or country home. They dispense with that greatest source of danger—coal oil lamps. Make this a selling point and get your share of the pofits.

Pyrene Fire Extinguishers

Make the home safer. This little fire extinguisher is large enough to handle any fire at the start --- small enough to be operated by a child. Indispensable on motor cars and in garages. Stock Pyrene Fire Extinguisher to-day. Sales are rapidly made.



The Canadian Fairbanks-Morse Company, Limited

Halifax St. John Quebec Montreal Ottawa Toronto Hamilton
Windsor Winnipeg Saskatoon Calgary Vancouver Victoria

CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Volume I | TORONTO, OCTOBER 5, 1919 | Number 8

How About It? Let's Go! To Tractor Shows At

CHATHAM

CHATHAM, Ontario, will be en fete during the fourth week of this month for two big affairs —the reception to the Prince of Wales, which is scheduled for October 22, and the three-day session of the International Plowing Match, Tractor and Farm Machinery Demonstration, which takes place October 21, 22 and 23, under the auspices of the Ontario Plowmen's Association, and the personal aegis of J. Lockie Wilson, superintendent of agricultural societies, and managing director of the demonstration.

The Kent County metropolis has a fine reputation for gathering enthusiastic crowds, and treating them hospitably. This section of Ontario has a large number of boosters for automotive machinery, and from all over Western Ontario—and even down to the Niagara Peninsula—interested farmers and dealers are planning to take advantage of this "meet."

$1,600 will be offered in prizes, and it is being advertised as the largest plowing match and farm machinery demonstration ever held in Canada. Every farm implement manufacturer in Canada will be represented, and also every manufacturer or distributor of tractors. The English and O'Brien farms, adjacent to Chatham, will be the scene of action.

Implement dealers will be given opportunities to see tractors at both belt and draw-bar work, and will have an opportunity to get a line on the various machines suited to their particular localities, and to decide upon what line they want to handle if they are not already in on the power machinery end of their business. Automobile dealers will be interested in the power machinery work, if they contemplate branching out.

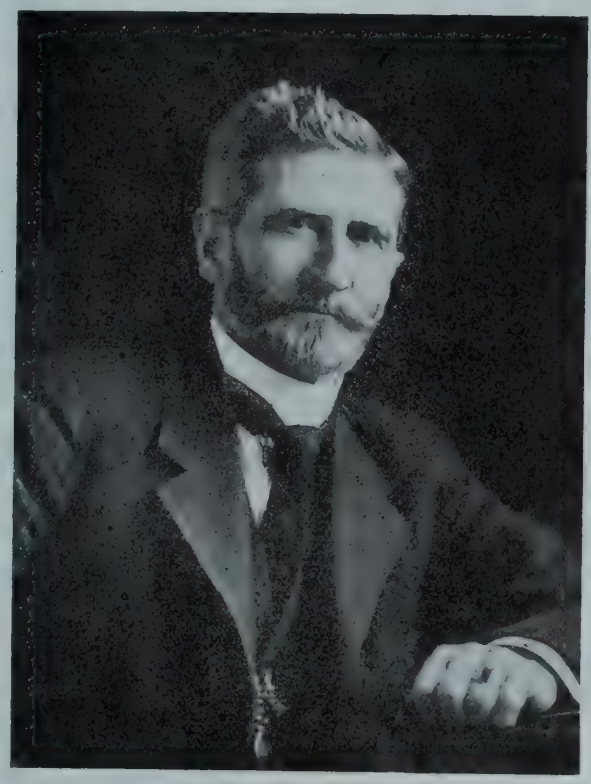
IT is to be hoped that there are plenty of demonstrations of various kinds of belt work, for the farmer wants to be shown that he can use his tractor for wood-cutting, silo-filling, and many other things besides plowing.

The Prince of Wales is expected to be in evidence on the second day of the demonstration. As this show comes just after the famous "twentieth"—when the bout with John Barleycorn, the O. T. A. and Hearst and Dewart takes place—it is a certainty that things will be roused to concert pitch. It promises to be *some* attraction, and 25,000 persons, at least, will likely be on the grounds if J. Pluvius behaves.

The list of exhibitors, at going to press, was not complete but included the following:

The Macdonald Thresher Co., Ltd., Stratford, Ont.; The Robt. Bell Engine & Thresher Co., Seaforth, Ont.; Orillia Tractors Co., Ltd., Orillia, Ont.; Canadian Oil Companies, London, Ont.; E. Leonard & Sons, London; Ont.; Goold, Shapley & Muir Co., Ltd., Brantford, Ont.; Renfrew Machinery Co., Ltd., Renfrew, Ont.; Cleveland Tractor Co., Windsor, Ont.; Geo. White & Sons, London, Ont.; Canadian Potato Machinery Co., Galt, Ont.; Cockshutt Plow Co., Brantford, Ont.; International Harvester Co., London, Ont.; Monarch Tractor Co., Brantford, Ont.; Canadian Aspinwall Co., Guelph, Ont., Gilson Engine Co., Guelph; De Laval Separator, Peterboro; Soil and Crop Implement Bureau; Sawyer-Massey Co., Hamilton.

As entries and inquiries were rolling in rapidly during the first few days of October, the list is likely to be more than doubled.



J. LOCKIE WILSON.

F. C. NUNNICK

OTTAWA

FROM all over Western Quebec and Eastern Ontario there is a stirring of the dry bones. Old men from Scotland recall the time when they were able to trudge all day after a pair of Clydesdales, with hind-quarters like the stern of a super-dreadnaught, dance all night after the plowing-match, and be up at daylight, fresh as a daisy. They dig out from the bottom of the big "kist" that held all their worldly possessions when they came over from Scotland, the tarnished medals they won there in the home of the plowing match; and they plan to be in Ottawa, if no longer as contestants, at least as spectators, on October 14, 15 and 16. But if they are not there as contestants, it will be because they are very, very old.

Everybody seems to be coming, including quite a number who passed up the big Exhibition in favor of this Interprovincial Plowing Match, Tractor and Farm Machinery Demonstration. Plowmen from as far away as Niagara have announced that they will be here; and as that is rather far to bring horses, they will engage their teams in Ottawa. F. C. Nunnick, Agriculturist, attached to the Commission of Conservation, who is secretary of the Eastern Ontario and Western Quebec Plowmen's Association, and is looking after this big match, is inundated with correspondence and entries for the plowing match and machinery demonstration, and says it will be the biggest event of the kind ever held in Canada.

Almost all the agricultural "big wigs" in both Provinces appear to be coming. Among them are Hon. S. F. Tolmie, Minister of Agriculture for the Dominion; Dr. J. W. Griswold, Deputy Minister; Hon. Jos. E. Caron, Minister of Agriculture for Quebec, and his deputy, Mr. J. A. Grenier; Prof. H. Barton, in charge of the farm at Macdonald College; in fact, almost everybody of note in the farming world in the two Provinces will be there. Mr. Baillie, Commissioner of Agriculture for Ontario, will be present one or more days of the match, and will take part in the prize awarding.

THE interest now being taken in good plowing is shown by the fact that at a comparatively small place in Almonte, they have raised three hundred and fifty dollars in cash prizes at the local match, which takes place on October 10. It will act as a sort of elimination competition for the big match, as the winners there will enter at Ottawa. In Dundas county there is a Junior Farmers' competition with two classes, one in sod and the other in stubble, and the Fleury Company of Aurora and the Bateman, Wilkinson Company are fattening the prize list by giving plows as prizes. Cash and medals will also be hung up.

Secretary Nunnick has written to many different Township Councils, asking them to help along the work by bearing the expenses of any young man from the district who would like to enter, but feels he cannot afford it. Several have already agreed to do so, and many will likely follow suit.

It will be recalled that a competition at Ottawa was arranged by the Ontario Government for last year, but the epidemic of "Flu" upset the plans. Eastern Ontario has never before had an Interprovincial match, although it has been held for the past six or seven years. Two years ago it was held at the Baillie farm between Paris and Brantford. The nearest it has come to Ottawa has been at, or near, Whitby.

THE demonstration of tractors and farm machinery will attract a very large number of entries. Already about twenty different companies have entered or signified their intention of doing so. There will be no tractor competitions, but only demonstrations. Some firms are coming with as many as six tractors. The Central Experimental and Booth Farms will be the scene of all those activities. The entries of farm machinery and tractors at this date—two weeks in advance of the show—were as follows:

The De Laval Company, Peterboro, Ont., Lauson Tractor.

The Massey-Harris Company, tractors and ploughs.

J. I. Case Plow Works Co., Racine, Wis., a big exhibit of Wallis tractors and power farming machinery.

Cleveland Tractor Co., Windsor, Ont., Cletracs.

George White & Sons, London, Ont., tractors.

Renfrew Machinery Co., Renfrew, Ont., Happy Farmer and (probably) Lacrosse tractors.

Chase Tractors Corpn., Ltd., Toronto, two 9-18 3-wheeled tractors.

Robb Engineering Works, Amherst, N. S., Baker-Robb tractor.

Goold, Shapley and Muir, Brantford, tractors.

Ford Motor Company of Canada (Montreal), 6 tractors.

I. H. C., Ottawa, 4 tractors.

Fairbanks-Morse, Ottawa, Case and Beeman tractors. The Beeman is a small tractor which will pull a one-furrow plow, spraying machinery, light harrows, etc. The operator walks behind. It has handles like a horse cultivator.

Aspinwall Canadian Co., Guelph. Potato digger demonstrated with tractors.

Shinn Manufacturing Co., of Canada, Guelph. Lightning rods, etc.

The Sawyer-Massey Co., Hamilton.

The Gilson Engine Co., Guelph.

Moline Universal Tractor Co., Moline, Ill.

At time of going to press, many other inquiries for space were being made, and it is assured that there will be a large crowd, a good time, a great exhibition of plowing and machinery, and—and—well, Let's Go!

Evils of Low Discounts on Small Farm Machinery

By A SASKATCHEWAN DEALER

THIRD OF THE "IMPLEMENT DEALERS' PROBLEMS."

THE margin allowed by agricultural machinery manufacturers on the sale of small implements is entirely inadequate, under present conditions, and unless this is remedied it will mean that large numbers of the dealers will be forced out of business. It has always been the case that men get into the implement business too easily. In the implement business, with no business experience, a man may get an agency when he is middle-aged. But, if conditions are made attractive for the dealer, he will stick to his guns, and prosper according to his deserts.

Why is it that margins are so inadequate? Because the cost of many implements has practically doubled during the past four or five years.

And yet

THE MARGIN STILL REMAINS THE SAME!

In the Prairie Provinces the margins are enforced by Provincial legislation.

It is more or less difficult to prove, convincingly, the average cost of conducting an implement business, for the reason that only a few dealers keep accurate records. But, for the Canadian West, extensive investigations have shown that 18% of the sales transacted are extremely conservative—in fact, too low.

The average margin provided by all companies, over delivered cost, and on all lines in general use in Saskatchewan, is actually

LESS THAN THIS 18%!

Don't neglect the old cat! You'll find the kittens interesting and profitable. "Motor World."

ON extra parts, the cost to handle is, of course, very much higher than the average for the whole business. Margins on large machines—binders and tractors for example—are somewhat higher, but still quite inadequate.

It is not so difficult to get at the margins paid by the various companies, and this has been pretty well done for the West. We are now awaiting action on the part of the wholesalers, trusting that they may be able to obtain the increase which, most certainly, is fully justified.

Part of the present difficulty comes from the fact that the margin in dollars per piece of goods is not more now (over increased transportation charges); than in 1914, while the retail price is well on toward double what it was at that time. This means, of course, that

The percentage of margin
The all-important thing
IS PRACTICALLY CUT IN TWO!

During the same time, every item entering into the cost of doing business has been vastly increased—capital required; losses on bad sales; cost of living of employees, resulting in increased salaries; supplies of all kinds, etc. In short, while the percentage of margin has been almost cut in two, the cost to do business, expressed as a percentage of the increased sales values, remains approximately the same. In other words, if in 1914 the overhead was 18%, it has kept pace with the increasing prices, and still is 18%—or MORE—of sales. The constantly increasing value of goods in stock—an item that should be described as not belonging in the profit and loss account, but more properly considered in the reserve, or insurance fund—one that ought to be set aside to absorb the losses that we are bound to have during the next few years—

THIS IS THE ONLY THING
THAT HAS PERMITTED
DEALERS TO CONTINUE IN BUSINESS.

When we reach the peak of prices, and are confronted with a price reduction, instead of price advantages on goods carried over—due in the first place to freight rate reduction; secondly, to the reduced rate of duty on implements, under suggested tariff legislation; thirdly, to probable reduction from other causes from time to time—then, all who buy outright, and handle implements on these extremely narrow margins,

WILL FACE A DANGEROUS SITUATION!

On a rising market failures are comparatively few; on a falling market—when it comes—there will, in all probability, be a different showing. We have tried to get our position here in the Prairie Provinces from every angle, and to compare conditions here with those in the East. One thing we know is that we are paying on a wholesale basis, F. O. B. factories, about as much as the Ontario farmer pays for the same goods, after the manufacturer has paid L. C. L. freight to the local point, paid a commission on the sale, and in many cases salary and expenses to a salesman (the latter alone probably 10% of the sale). In addition, the farmers' paper is carried without interest before maturity, and this is done on two or three payment sales, spread over probably as many seasons. Presumably there is some loss on such paper and some collection expense.

This photograph contrasts the two methods—four horses pulling a binder, and a powerful tractor doing the same work, in the same field.

Implement Dealers Can Sell Fencing Profitably

WHEN the implement dealers are taking on side lines, it doesn't pay to overlook wire fencing. Here's a clean, neat item of business in which a large number of implement dealers and hardware merchants are making a nice little profit.

The hardware men say that this is their legitimate exclusive line. Why should it be? Who gets out and goes among the farmers more frequently and persistently than the up-to-date implement man? Who knows what the farmer wants more than the implement dealer who has just made a tour of the country-side, selling agricultural machinery?

Therefore, in your town
If
The hardware merchant
Has this business
It is
Your fault!

If you are out for increased business and greater profits—where the inclusion of such headlines is not going to materially increase your overhead—don't neglect wire fencing.

There is just one time when you need to give service on wire fencing—and that is

When you sell it.

Make sure it's a good, sound article when you take up the agency, and you'll have no trouble in building up a good business.

Recently the M. T. I. asked a few of its readers who handled wire fencing, how they liked it, and what were its advantages. All of them emphasized the necessity of keeping a certain amount of fencing always in stock, but stated that they practically never carried any over from season to season.

TO convince a potential buyer of the merits of a tractor or automobile usually requires some expenditure. If a spark-plug is found to be faulty, you have to see that another is supplied; if a tractor "bucks" the day after you have sold it, it is necessary for the dealer to go to the scene of difficulty, even if it is fifteen miles away.

With wire-fencing, there are none of these difficulties, providing that the product of a reputable firm is handled. The commodity speaks for and practically sells itself; its merits can be seen at a glance, and the possibilities of anything happening equivalent to the breakdown of a motor car are remote in the extreme.

What a contrast is presented here from the customary method of displaying farm machinery by exposing it to the elements outside an implement warehouse, or by storing it promiscuously in the dark interior of one of these buildings. This is the display room of Victor E. Forrester, who is the agent of the International Harvester Company at Camrose, Alta., and incidentally mayor of the town. It is a beautifully sunlit room adjoining the office, where every article kept in stock is shown off to the best advantage. The entire display is on view from the broad windows in front.

A feature of this agent's business is that he keeps his machinery repairs behind a wire enclosure, which is kept locked when attendant is not present. In this manner the repairs are not handled and mixed up by farmers who undertake to dig out the parts they want.

Howard L. Knox, who handles farm implements and Chevrolet cars at Lynden, Ontario, lays down the following essentials in the successful selling of wire fencing:

Know the requirements of the people with whom you transact business.

Keep a reasonable supply of these goods on hand for immediate delivery when required, thus giving service.

Keep your name and place of business prominently before the people at all times.

Have a uniform trade price on all articles, thus using everybody the same and giving confidence to the people.

Mr. Knox's opinions are to be particularly respected in view of the fact that he was one of the winners of the Frost Steel and Wire Company's contest in wire-fence selling in Canada, thereby securing a trip to the San Francisco Exhibition in 1915.

The advisability of handling a line of goods the qualities of which are well established is illustrated by M. C. McDonell, of Harrison's Corners. Mr. McDonell sells wire fencing in conjunction with his implement business.. His first experience in handling wire fencing was unsatisfactory, simply because the make of fence he sold was of an inferior kind. It was, he said, too hard, there were loose strands in it, and the gates supplied had the unfortunate tendency to come apart at the weld.

WITH the output of another firm, however, he has had considerable success, the profits being good, the commodity giving entire satisfaction and payments being fairly prompt. Occasionally some time elapses before the settling of an account; but in such cases he charges interest.

"It is one of the best side lines a man can handle," he concludes.

An entire car of wire fencing disposed of in three days was the initial experience of F. E. Hendershot, a hardware merchant of Mount Forest. The representative of the company who sold Mr. Hendershot his first car volunteered to accompany him on his opening canvass of the territory. The result was the disposal of the car load in three days. And during the same spring, five cars of the same make were sold, Mr. Hendershot winning the New York trip of the company.

Three years later he won the California trip by selling nearly seven cars in one spring.

Advertising in the local paper, and by means of circulars and catalogues, has enabled Mr. Hendershot to attain this success, he says.

"Fence should be sold for cash, or nearly so," he adds. "For years I have priced my fence so as to be able to allow a discount of two cents per rod, for spot cash, at time of delivery, and I find most men take the discount."

Campaign Against "Cut-rate" Tires

THE sale of "cut-rate" tires is going to play a big part in negotiations which will take place during the next few months between members of the Retail Automobile Garage and Accessory Dealers' Association, of Ontario, and the manufacturers of the various makes of tires sold in Canada. A series of meetings of the various branches of the Auto Section of the Retail Merchants' Association is planned, and at every meeting it is certain that the tire discussion will play a prominent part.

The first meeting of the season took place in London, Ontario, when there was an enthusiastic meeting of representatives from various parts of London and Middlesex and environs, including Chatham, Alvinston, Strathroy, Parkhill, etc. The Fall Fairs interfered somewhat with the attendance, but did not prevent the transaction of a lot of important business.

After the various members of the association had aired their views on the tire question, it was decided that the Provincial Executive should interview the tire companies, and endeavor to get them to discontinue the sales of their products, except to all "legitimate" garage and accessory dealers; and also to protect their list price and not allow dealers to cut the same.

This tire question has been a vexing one, and several full page ads. have been run in a number of daily papers throughout Canada, educating the public on the value of "good" tires, that is, genuine "firsts," at regular list price. This campaign will be continued in an endeavor to convince both dealers and public that "seconds" and poor-quality tires must be sold only as such—and very plainly marked so that the public may be under no delusion as to what is being sold.

IN order to enlarge the London and Middlesex branch of the Automobile Dealers' Association, it was decided that each district should work to a half-way point, and endeavor to secure a complete membership all through the country. For instance, the Chatham representatives who were at the meeting promised that they would work as far east as Glencoe, and as far west as Tilbury; the London district will work as far west as Glencoe, and take in the entire county of Middlesex, St. Thomas will shortly be asked to cooperate in a similar manner, and Provincial Secretary Miller is planning to organize the whole of the Province in this manner.

The London and Middlesex branch didn't allow any time to pass without putting their good resolutions into effect, and on the three days following the meeting twelve new members from outlying portions of the city were enrolled on the books. Each dealer called upon seemed very anxious to have the tire situation placed upon a proper and legitimate basis, and offered to help the Association in the forthcoming campaign.

Wilfred Hodgins, president of the London and Middlesex Association, writes to the editor of the M. T. I. that his organization will hold two meetings a month, and that one will be for business and one for pleasure. The association can be kept going at top-speed through this method, the social functions enabling the various dealers to get acquainted and to fraternize in a way that is usually impossible at purely business sessions.

Would You Believe It? Tractor Imports Exceed Auto and Truck Imports

IT may seem incredible at first glance, but there are more tractors being imported into Canada this year than automobiles and trucks put together. Of course, this is explained by the fact that comparatively few cars are imported "whole." Engines and parts are imported to the value of many millions of dollars. The vast majority of cars are *assembled* in Canada. The increase in the number of cars manufactured in their entirety in Canada is also showing an encouraging growth.

During the first eight months of 1918, there were 9,162 autos and trucks imported into Canada from the U.S.—and none from Great Britain. In the first eight months of 1919, there were 7,919 autos and trucks imported from the U.S., valued at $7,961,005. In addition, three pleasure cars and six trucks came from England.

The importation of tractors, valued at less than $1,400 in the country of production—the vast bulk—from January 1 to August 31, 1919, aggregated more than 8,000, with a value in excess of $8,000,000. The figures, month by month, show:

	Tractors costing not more than $1,400 in country of prod't'n.	Value of same.
January	3302	$3,512,038
February	1480	1,584,596
March	467	448,323
April	1009	897,761
May	388	432,341
June	385	407,620
July	495	472,283
August	521	464,602
	8047	$8,219,564

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LET'S GO

DEALERS who handle implements and tractors—and who live in Ontario—should attend either the Chatham or the Ottawa demonstration this month. The Ottawa demonstration will be held October 14-16, and the Chatham plowing match, tractor and farm machinery "show" is scheduled for October 21-23.

It seems probable that close to 50,000 persons, at least, will attend both demonstrations. The Chatham demonstration is the older of the two, and may draw the larger crowd, but anyone who attends either will be amply repaid.

Dealers who handle tractors now should attend to watch the demonstration of the tractor they handle, to check up its performance with others, and to convince themselves that their tractor is exactly the one which should be sold in their particular communities.

Dealers who do not yet handle tractors will want to attend to select the tractor best suited for their districts. And, all dealers will have a splendid opportunity to find out the farmers who are really interested, and who are the real live prospects.

A large number of automobile men will likely attend, also, because, more and more, these dealers are taking on tractors. The implement papers in the United States are announcing now that "the implement dealer is the only logical man to handle tractors"; the motor papers are saying the same thing for the automobile dealer. But, the fact remains that tractors are being sold by both classes and will continue to be so sold. It really depends on this question: "Can you give adequate service?" Then, provided you have the capital and organization adequate to properly handle the proposition, we say "go to it," but—not unless you can give adequate service.

AUTO WINTER BUSINESS

IT seems almost superfluous to remind auto, garage and accessory dealers that their orders should be in for winter stocks. But the other day we ran into a chap who runs a garage not so very far from Hamilton, and asked him for some chains. Did he have them? No. Had he ordered them? Not yet.

Don't let this slip. Don't wait for the first snow flurry before you get a move on. Whatever, you want, whether it's chains, grips, hood covers, anti-freeze mixtures, car heaters, robes, gloves, running board mats, or bulbs—get your orders in—quickly—now—if you haven't already all that you want.

DO YOU AGREE??

"THE remedy, or at least a partial one, lies with the individual owner," says a letter to the Washington Issues. "A sensible man would not dream of leaving thousand-dollar bills lying unprotected on a curb stone and expect to find them on his return some hours afterward; yet he will leave his car at the mercy of any smart crook who takes a fancy to it, parked in secluded spots at all hours of the day or night.

"Locking a car in the ordinary way will not suffice, as it is no bar to the trained mechanic, who soon contrives to make starting connections in the machine itself.

"It should be made a misdemeanor for any autoist to leave his car unlocked both at the switch and the hood as well. By double locking the average thief is almost outwitted, if not wholly so."

Don't let your customers forget the epidemic of auto stealing which has swept over the Eastern and middle States, and to a somewhat lesser extent in Canada, during the past year, and sent Insurance rates against theft sky-high; sell him the soundest device you can procure from your jobber.

PRICES AND PROPHETS

WE'RE not going to say "I told you so," but would just like to remind our readers that six months ago we were endeavoring to drive home the fact that no price reductions were coming. And they're not! The steel strike in the States, and the continued disturbed condition in the leading industrial countries, will not permit lower prices for quite a while yet. How soon, we decline to prophesy. All indications are that it will be more than a year—particularly as far as farm implements and automobiles are concerned. One well-known tractor has dropped in price, and one or two minor cuts on small implements are reported, but if there are are others we have yet to hear of them. And, prices on nearly a dozen makes of cars have jumped!

SERVICE—AND SERVICE

THERE are few days pass when a car owner does not hear some other benzine-buggy operator kicking about a garage bill or garage service.

Who Invited Her, Anyway? —From "Motor World."

Of course

THIS SHOULD NOT BE!

Of a number of cases which have come to our notice lately, here is one:

A man who owns a Blick, 46 Q model, found himself stranded on the outskirts of a town with starter trouble, either in the magneto itself, or in the starter fly-wheel. He took a look at all the usual causes, then called the nearest Blick service station.

"Oh, you're just out of our district. The office at —— looks after the street you're on," was the reply. So, this office was called. "Have a man there in half an hour," was the reply. In about half an hour he showed up, filed the platinum point which had been "burned," and hustled away. He started the engine, and the owner was assured everything was serene.

He left his 'bus outside a theatre, and when he came out the starter again wouldn't work. He was towed into his garage, and investigation the following day showed that the trouble was really in the starter pinion. The first service man, if he hadn't been in a hurry to get home, could have fixed this if he had taken the pains. But, he DIDN'T, and now this man—who has had other similar experiences—says he will get a car next time made by a company that will give him service—and SERVICE spelled with capital letters.

THE WINTER MONTHS

THE winter months should not be allowed to be a succession of dull months. There are plenty of articles which can be sold, and with a good margin of profit, too, during the next four or five months. Implement dealers should not admit that they are going to have slack season—when they can sell manure carriers, water bowls, hay carriers, lighting plants, separators, and a dozen other side lines. Read the article on page 18 of this issue. Garage men should not "let out" their mechanics; read what Mr. Glover has to say in this issue. Use his letters—you're welcome to them. And, when you have used them and proved their worth, tell us about it. Mr. Glover will be glad to know it, and so will we. If you have any new "dodges" of your own, tell us about them, too.

HOW MUCH SERVICE?

WHAT constitutes free service in connection with the purchase of a tractor, as rendered by manufacturer or dealer, is an important and perplexing question in the minds of many tractor buyers. When one buys a new tractor, and especially if it is his first machine and he knows little or nothing about tractors, he of course, has a right to expect that the dealer's or manufacturer's service man shall stay with him until he is reasonably familiar with the operation and adjustment of the machine, and thoroughly understands the language of the instruction book. In addition to that, he is entitled to a reasonable amount of free service the first week or two or until he gets onto the ropes in good shape.

The amount of free service to which a tractor owner is entitled, after he becomes familiar with the operation of his machine, will depend entirely upon circumstances. If there is trouble and it proves to be the fault of the tractor or the man who sold it, then it should cost the owner nothing to have it put in good running order again. But if it is caused by the owner's negligence or carelessness, it is only fair that he should pay the service charges out of his own pocketbook.

While the trade publications, dealers and manufacturers spend considerable time and thought in discussing "free service," the tractor owner is not concerned as much about free service, as he is to get good service promptly when he badly needs it. He is usually willing enough to pay, yes, to pay well for it, if he can get good work and get it done quickly, for during rush seasons minutes frequently mean dollars and any delays due to equipment being out of commission are naturally costly.

With but possibly few exceptions, it will be no trouble for dealers and manufacturers to come to an agreement with farmers as to what constitutes a reasonable amount of free service, that is to what free service they are entitled. But the farmer will, or by all means should, insist that whether service is free or charged it should be prompt and all that the word "service" implies.—*Power Farming.*

YOUR PHOTOGRAPHS

IF you are putting up a new implement warehouse or garage, or building an extension, or have dressed up your windows in a particularly attractive fashion—take a photograph of it, and send it to the Editor. If it reproduces well, we'll be glad to run it. Several have already been received, and will appear in forthcoming issues. Also, tell us how your business has grown—and how you've "put it across." The M. T. I. editor is interested—and so will the readers be.

Rosenheim attends a Friendly Party

Pinched (With Permission) From "Timken Magazine"

Sketches by CLYDE E. DARR

Max greeted the party cordially and even managed to shake hands with Abe Figelbaum.

"WELL, I see Abe Figelbaum is back in town," said Simon Arnheim to his friend, Max Rosenheim, proprietor of the Scotch Woolen Mills Emporium, High-Grade Men's and Boys' Clothing.

"It's more or less free country yet, Simon, and while the law is a joke what lets a lowlife and a crook like Abe Figelbaum walk the streets without getting pinched on gen'ral principles, yet there can't nothin' be done about it. Me, I remember when Abe was in reel estate business here and his partner wasn't honest, either. Them fellers, they sell me some Floridy land for three hunnerd dollars where I could get rich raisin' them pecans. I go look at the land later, and, honest, the only thing you could raise on it would be a sail when the tide was in. I sue 'em in the court and lose because them high-binders swear they reppersent the land as what I could raise Pekins on, meanin' ducks."

"It is a skinch," remarked Max to himself, "the feller is a child."

"Always I say evverbody is a sucker at something," said Simon consolingly. "You I bet could skin Abe like he was an infant if he should come in to buy one of them nearly all-wool soots that you get wholesale for eleven seventy-eight, twenty, ten and five off if you pay in ninety days, and which you mark down special at thirty-seven fifty, cash price. Abe is a slicker in some ways and in others is not more bright than you are. If you want to get even why don't you hunt him up and sell him that bum automobeel of yours?"

"Whaddaye mean—bum automobeel? Simon, that car she has run over eight thousand miles and the repair bills is purely negligee, mebbe once in a while a new shoe, or muffler or cap or hose—"

"Say, Max," interrupted Simon, "you ain't talkin' about an automobeel, are you, with this here 'negligee, shoe, muffler, cap and hose'? Sounds more like an invoice of a second-hand gents' furnishing goods."

"Well, anyway, that there car of mine is all right. She runs just like a, now, watch."

"Yes, like a dollar watch which you wind up for an hour, shake it, and it runs fifteen minutes, and slow at that. Me, I aint going to buy it, so you don't need to waste time tellin' me its good points. I was just tellin' you that a wise guy in his own line is generally most always a sucker when he gets out of his own speshulty. Now take Abe Figelbaum. As a real estater he is a bear, but as a poker player, for instance, he is like you would be walkin' a tight rope or playin' a vi'lin, which you are too old and fat to do either. In a poker game Abe is always the goat because you can read him the same as a big electric sign on a dark night. If after he draws his cards he keeps pullin' his right ear, always he has three aces or better. If he scratches his nose when he makes it a big bet, always I call him if I have better than one pair because it is a cinch he is bluffin'. If he raises before the draw and then says 'gimme two off the top' it means he is drawin' to a three-card flush and expects to bluff it through, but if he says 'I guess I'll take two cards' it means he has threes better than tens. When Abe he has a full house he might as well lay it face up if he's playin' with the fellers that know him because he always squeezes the cards in his right hand and bets the limit before it's his time to bet, he is so eager. And when he is four-flushing always he asks to have the cards cut before he draws his one, and if he don't make it he tips his hat to one side and bets like he was John D. Carnefeller handin' out them bookless liberies; but if he makes his flush he is slow and hesitatin' like he hates to hurt your feelin's by raisin' you the limit."

"In a poker game you can read Abe the same as a big electric sign on a dark night."

Simon departed, leaving Max to the cares of business. During the afternoon Meyer Goldman dropped into the store and said: "Max, is it you got anything speshul on tonight?"

"Not a thing, Meyer, unless it is that Rachel she wants to go to the pitcher show, which I hope she don't, because that's my idee of spending a bum evening."

"Well, Herman Feldman told me to tell you he is giving a little party tonight and he thought mebbe you'd like to be in on it."

"What kind of a party? Already I hear something about parties what Feldman gives, and me, I don't care to ride in the wagon with mebbe a couple of them burleskers when the house is pinched."

"Oh, this is just a small seleck party with a little lunch which Sol Epstein furnishes free gratis for nothin'."

"'Sall right, I'll go," said Max. "There's probably a ketch to it somewhere, but if Sol Epstein who charges extry for toothpicks in his restrant is going to offer somethin' free for nothin', the sight will be worth seein', believe me. But what is it we do, talk over this heer, now, league of Nations or what?"

"It is to be just a little friendly poker party, understand."

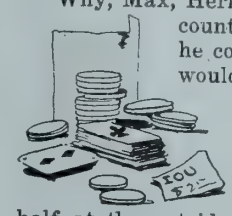
"Oh, a poker party it is. Meyer, you understand my wild days are over, or words to that effeck, but I ain't a crab. As a reglar thing I don't approve of poker, for many a friendly game have I seen break up in a riot, and fellers what have played too many friendly games are now in a home for the friendless, but once in a while in moderation I can't see any harm in it if Rachel she don't find it out. Who will be there?"

"A liar he is such that he can't tell the truth even when he makes signs."

"Well, there's you and Sol Epstein, Herman Feldman, and me, also Ikey Cohen, Moe Feinberg and Abe Figelbaum, just a nice seven-hand game."

"Abe Figelbaum, hey? Why it is that Abe Figelbaum, who makes Jesse James look like a Sunday-school suprintendent, is allowed to horn in on a gentlemen's party?"

"Why, Max, Herman says it is mainly on Abe's account that he is giving the party. Abe, he comes back to town with a roll that would choke a whole herd of ellerfants, and he's a rotten poker player. With the rest of us playin' with leather vests and never bettin' less than two pair, nobody would lose or win over a dollar and a half at the outside, but with Abe in the game usin' lots of money and poor judgment we all gotta chance to buy us mebbe a new automobeel apiece."



"Oh, all right, I never let pers'nal dislikes stand in the way of business, and when a feller has inside informashun like I got it would be robbin' myself not to take advantich of it."

When Max arrived at Herman Feldman's insurance office he found the rest of the party assembled, and he greeted them cordially, managing even to shake hands with Abe Figelbaum. The guests seated themselves around the table and Moe Feinberg shuffled the new deck counting out the chips.

"What is it to be, boys?" asked Feldman while Herman began as he arranged the whites in stacks of twenty and opened up the boxes holding the reds and blues. "Is it to be quarter limit with a round of stud after each full house, or what?"

"If you ask me," said Abe as he laid a thick roll of yellow-backs on the table, "I say that is a piker's game. For me I favor an open game with the ceiling the limit, deuces wild 'n everything, but it's your party, Herman; you fix it any way you want to."

"Well, s'pose we make the whites five dollars a stack, ante one chip with two-dollar limit unless it is raised twice, then the limit goes to five. There y'are, a white stack apiece and twenty dollars more in reds and blues; red chips a dollar and blues five. Deal 'em out, Moe."

Moe dealt the cards and Sol, Max, Meyer and Ikey passed. Abe tossed a red chip in the pot, breaking it for a dollar. Herman, Moe, Sol and Max stayed and drew cards. Abe called for three, looked at his hand, pulled the lobe of his right ear reflectively and bet two dollars. "Ah-hah," thought Max, "three aces he has or better and my kings up are no good." Moe called the bet with tens and sevens, Max threw away his hand, and Abe laid away his cards down face up. "It is three bullets I have and, if you can beat 'em, take the money."

"It is a skinch," remarked Max to himself, "the feller is a child. All I do is to watch his signs and I know when I have him beat." On Meyer's deal, Cohen breaks the pot, and Abe, Sol and Max stay. Ikey draws two, and then Abe said: "Before I draw I like it to cut the cards." "Four-flushin' he is; now I look

close at his ackshuns to see if he makes it," thought Max. Abe drew one card and Max took three, catching his third Jack. Ikey, as the opener, bet a red check; Abe, sitting next to him, reached up, tipped his hat on one side and said: "Ikey, you can't fool me with two queens and a kicker. I raise you two dollars."

"The feller is bluffin'," thought Max after Sol threw down his hand, "the sign says he was a drawin' to a flush and didn't make it." Max picked up four red checks and said: "Abe, I got a purty fair hand my own selluf. I just raise you two dollars."

Ikey showed two queens with an ace and threw his hand down in disgust. Abe said: "It being the second raise, the limit now is five. Max, I see your two and raise you five, which I guess will stop you."

"All right, I call you, what you got?" said Max, tossing in a blue.

"Now aint that the funniest thing?" said Abe. "I draw one card for a dimun flush and ketch me a spade—hold on, Max, don't take that pot yet. It was the nine of spades what I catch and it makes me a straight, and all the time I think that I was bluffin'."

The game progressed for several rounds with just average hands showing. As Ikey was shuffling the cards, Abe asked: "Herman, got any cigarettes?"

"Sure," said Herman, "you'll find some in the top drawer of the desk in the next room." Abe left the table to get the cigarettes and Ikey said: "I never like that feller. Let's cold deck him. Max, I fix it up for you. See, I give Abe three queens and a pair of tens, to you I give two nines and to the rest of us just five cards. Now Abe he breaks the pot, the rest of us drop out and you raise him before the draw with your two nines, because all the time I have the other two on top of the deck. Abe mebbe raises you back. Then he stands pat and you draw three cards, makin' you four nines against his full."

Abe came back with a cigarette hanging to his lip, picked up his hand and glanced suspiciously at Cohen. He studied for a moment. "This hand ain't so much, but I break it for a dollar and give you all a chance." Herman, Moe and Sol passed and then Max said: "Abe, I don't think you got more as a pair of Jacks, so I raise you two dollars."

"Max, I think I can give you ackshun; I see your two and raise you five, which legally I have the right to do."

"Five right back of you," said Max. "Once more I raise it," rejoined Abe.

"Oh, well, that makes a purty fair pot, now we draw cards." Ikey picked up the deck and asked: "How many cards, Max?"

"Hey, is it I don't get a chance to draw?" asked Abe. "Me, I am first from the deal, and pliteness it is to ask me first."

"All right, Abe," said Ikey, winking at Max. "How many?"

"Me, you can give two cards," said Abe, discarding his tens.

Max's jaw dropped in astonishment and Ikey said: "You mean you want two cards reely?"

"Sure, stupid. Never did I like those two cards what I throw away. To me they are not lucky."

Silently Ikey dealt off the two nines that were to go to Max and then gave Rosenheim three perfectly useless cards. Abe bet two dollars and Max slammed his hand down.

"Tens they never was lucky for me so I throw them away," said Abe as he raked in the pot and turned over the pair he discarded.

"You have a full house and break it?" asked Herman.

"Sure, I never like them tens. Besides I figger three queens is good and mebbe I get a bet if I draw cards. When you stand pat it always scares 'em out."

For two hours Abe won steadily, always having just a little better. Seemingly he was playing reckless, but losing only the smaller pots. Once he said: "Gimme two off the top," which Max remembered meant he was drawing to a three-flush. He was, but he made it, reducing Max's visible capital about twenty-five dollars. Another time he gripped his cards tightly and bet eagerly out of his turn. Max laid down three kings, for this was a sign Abe had a full house. Abe put down the cards face up, saying: "It is lucky you fellers pass; a full house I have, fives on threes." When the cards were spread, however, it showed fives and threes with a deuce. "Which only shows," said Abe, "sometimes when you think you got a full house it is just as good as if you have it."

"Oh, hum," yawned Abe at twelve-thirty, as he stuffed the bills in his pocket and tapped his stacks of red, white and blue. "Herman, you better cash me out. This game is too slow. Here I play for four hours and I bet I ain't over five hundred winner. Me, I like an open game with the lid off where you play deuces wild, cats and dogs and also the joker. Good night, fellers," and Abe disappeared down the stairway.

"Shall I get it up the lunch from downstairs?" asked Sol timidly.

"No," said Herman savagely as he slammed the chips back in the box. "I got no appetite for lunch myself and I don't believe the others have either. This game is over; count up and I cash you out, and you fellers will have to take checks because that Abe Figelbaum carry away all the cash money."

"Meyer, I say it once before and I say it again; Abe Figelbaum is a lowlife, a crook and a double-crosser. A liar he is such that he can't tell the truth even when he makes signs. Me, I never want to see him again unless it is in the synagogue where evverbody can say: 'Don't he look nacherl?'"

Practical Hints to Increase Sales

By F. H. SWEET

IN these progressive times it is only a "has been" who does not keep his windows attractively trimmed, but it looks as though a little more attention might be given to the store front. Some that I have recently seen can only be described by one word—awful. If your windows are worth trimming it is worth while to give them a proper housing—the money will be well spent, and will bring a quick return.

Some implement stores have a good front but do not keep them in proper condition. Signs and entire front should be painted the moment they begin to look shabby. A syndicate of garages has a rule that all their store fronts and outside signs shall be painted once a year. This may not be always necessary, but they are going to take no chances, and if they err it is going to be on the right side. Watch your store front carefully, and when it begins to look shabby, don't delay, but give it paint.

Was in a nice appearing accessory store the other day, and was very much surprised to find the front of the counters in a very filthy condition. A dust rag should be one of the tools supplied to each counter.

IT'S about time to do away with erroneous and misleading signs—yes, and lying signs. One shop was literally full of them reading $5 values $3.50—$2 values $1.50—$1 values 50 cents, etc., so that it looked as though everything in the place was a tremendous bargain—or that the truth was being unmercifully stretched. And when these extraordinary value signs rested on displays of staple goods sold everywhere at the price asked, even a blind man would have doubted this dealer's honesty. One should be very careful about the wording of signs. Put pep and snap into them, but tell the truth.

Speaking about signs, the "talking sign" is not enough in evidence. That it is a sales maker has long ago been proven. To make a "talking sign," fasten the article to a piece of bristol board of the proper size and then print a snappy sales talk about it. It's a winner.

In visiting a dozen or more accessory stores and garages, I saw only one ledge trim that was worth mentioning, and that was only fair. The ledge trim does sell accessory and implement goods even if it is above people's heads. They read the card ads., and they are above the line of vision. Do not keep a ledge trim up forever. Study this over a little and see what you can do in this line. It is surprising what merchandise you can show to advantage on the ledge if only a little thought is expended upon the matter.

DIRTY electric bulbs and fixtures! When the globes are allowed to remain dirty some one is paying for light that they do not receive. You would not pay for any other goods you did not receive, why pay for light? Clean up and notice the difference.

In one store there was a counter which cannot be described. Oil cans, repair parts, fine tools, flashlights, and other things all tumbled in a heap pell-mell. This shop was in a really disreputable condition, and as it has a very choice location in a very good town, something is going to happen in the way of competition very shortly. The way to keep competitors (that is, if you want to) out of your town, or your vicinity, is to have your business so well in hand that they will hesitate to risk their money near you. The good merchant does not fear competition, however. He realizes that it must come sooner or later in any live town—and the sooner it comes the better.

Given in the spirit of friendliness. "He is your friend who tells you of your faults."

McLAUGHLIN CONVENTION

EARLY in September the McLaughlin Motor Car Branch Managers held a convention in Oshawa. Business sessions were held which were addressed by A. E. Cutler, Comptroller; Mr. Moyse, Chief Engineer, and representatives from the Willard Storage Battery Co. and the General Motors Acceptance Corporation. Sales policies, schedules and allotments were gone over for the season and altogether a very profitable time was spent. On the last day of the convention—Friday—the entire party motored to Rice Lake for a day's fishing, where a shore dinner and a shore supper were served by local caterers. The day was a tremendous success despite the fact there was not a great catch of fish, but the party had a most enjoyable time.

Front Row (left to right)—R. McKenzie, R. S. McLaughlin, G. W. McLaughlin, J. H. Beaton (sales manager). Second Row—R. W. Lawrence, Saskatoon; A. McDonald, Oshawa; R. H. Anderson, Hamilton; W. A. McAlary, St. John; A. A. Ross, Vancouver; M. J. Jacobi, Oshawa; C. M. Ricketts, Toronto; G. E. Ansley, Montreal; P. J. Lee, Belleville. Third Row — Walter Gunn, London; F. B. Mastin, Toronto; W. G. Hawkins, Calgary; T. R. Price, Ottawa; W. H. Moyse, chief engineer; Mr. Appledorn; W. M. Christian, service manager; W. G. Parsons, Regina.

DOLLARS FOR DULL MONTHS

MANURE CARRIERS: WATER BOWLS: HAY CARRIERS:

What do these mean to you, Mr. Implement Dealer? If they don't mean anything now, read here how you can turn 'em into real dollars!

WITHIN a brief period after the readers of M. T. I. get this issue, the "dull" months will be commencing, and implement dealers throughout the country will—in many cases—feel that they will be doing well if they transact enough business to pay for the tobacco and "Twist" used by their scores of friends who will be dropping in for a comfortable seat by the stove, and a few hours' chat per week.

Why should these months be unremunerative? Dull they may be, as far as amusements are concerned, but just think of some ways you can clean up a nice bunch of coin, while other dealers, without any "git-up-and-git" about them, are twiddling their thumbs, joshing the Ontario Temperance Act, or telling what they really think about "That Man" O'Connor!

Turn your spare hours into cash. That's the way to keep your "overhead" from eating you out of house and office.

How can this be done? Well, there are lots of ways, and just a few will be mentioned below, while others will be discussed during the winter months.

For one thing, certain items of barn equipment are sold mainly in October, November and December. These are lines which several Canadian firms are pushing aggressively, and on which they are willing and eager to back their agents and dealers by paying liberally toward the expense of local advertising. Of the barn equipment which can be sold to best advantage during the next three months, the leading items are: manure carriers, water bowls and hay carriers.

TUSH! What's the use of carrying those lines? There won't be enough in it to pay you for your trouble. Thus spoke one implement dealer—rated in a credit agency report at about $500—when tackled on this proposition last month.

Maybe other dealers are laboring under this delusion, too. Here are the facts:

Manure carriers are good sellers, particularly in the communities where new and larger barns are going up—or have gone up. Manure carriers bring in IMMEDIATE cash returns, because the manure spreader is usually installed in the fall. The farmer gets the use of it at once, and can be induced to pay for it at once. It is not a line which is sold, as yet, to any great extent for future delivery.

And—

The margin on the job is 20%, and a job runs from $80 to $200. The leading companies manufacturing barn equipment give their agents all the help they want. One company has a score of salesmen in Ontario alone. With this line, there are no second-hand goods to take in on trade. Once the job is installed there is no bother about "service"—this sovexing question does not arise. It isn't like a line which a dealer has to keep watching all the time until he moves to another town or shuffles off this mortal coil.

To make a success of this business, the time to do your canvassing is

RIGHT NOW.

If the dealer will start to canvass early, from thirty to fifty manure carriers should be sold in a good locality. All reports which can be obtained state that it will be a good fall for this line. The scarcity of labor, the increased purchasing power of the farmer, the demand of his growing family for modern equipment, and the inclination which seems to be all-pervasive these days that man was not intended to spend his life in too severe drudgery—all these go to make a receptive feeling in the mind of your prospect.

THE dealer should know how to erect a manure carrier correctly. If he does this he is assured that he won't have any trouble with it in the future, and he will get "repeat" orders from the same community. Erection is simple; the instructions that any manufacturer or his representative will give are simple. Let the farmer do his own erecting, by all means, if he will—unless you fear that he is likely to make a poor job of it. If the dealer has to be responsible for the erection of the outfit, $10 should be added to the price. Then, either do the job yourself and collect another ten-spot for your labor, or hire someone else, who has studied the right way to do it, to fix up the job for you.

Water bowls should logically be sold to the farmer in the fall. The farmer wants the bowl for his stock and will likely install the bowls just before he ties his cows up for the winter. There is also a twenty per cent. margin on this line, and with pipes and fittings one job will run into a tidy little sum.

A water bowl job will very often include a tank, or a pump, or a gas engine or windmill, and when everything is added together the total is not one to sneeze at. Many salesmen of this, and other lines, will heartily co-operate with the dealer in closing up prospects. If possible, get cash for the job, and give the farmer a 5% discount. It's worth it, especially when the dealer can make an arrangement with the water bowl manufacturer to let him in on the discount, too.

Water bowls have been on the market for a long time, but evidently both farmers and dealers have been slow to realize their advantages. If you, Mr. Dealer, don't know what these advantages are, get in touch with some manufacturer, and find out. American implement dealers have gone in for this line strong in the last two or three years, and many have discovered veritable gold mines.

A GREAT deal more interest is being taken now in the individual records of cows than a few years ago. Anything that will increase the production of the cow is eagerly sought for by the farmer. Feed is too scarce and labor too hard to get to permit of many boarder cows. A water bowl increases milk production enough to pay for itself two or three times the first year (including the cost of fittings), and there have been cases recorded where the bowl actually paid its cost four times over within the first year after it was installed.

Why should any modern farmer impair the health and productive capacity of his cows by permitting them to drink from muddy streams and polluted pools? Why should he allow his cows to suffer from indigestion as the result of too much cold water on the stomach? The days are waning fast when you will find a farmer, who *is* a farmer, *driving* his cows to drink. So, Mr. Dealer,

DRIVE

A few of these facts home. If you want more arguments, see someone who makes these bowls.

The up-to-the-minute dealer should stock his hay tools in the fall, at the same time that he makes his contract. He orders for delivery during the spring months. By ordering *now* for a spring delivery a dealer will protect himself against a rise in prices—and we're all pretty well convinced now that the general tendency of prices for quite a while yet will be—

U-P

And then some more. The mammoth steel strike in the States and the transportation troubles in England will postpone even longer that happy day we're always looking toward when post-war prices will reach somewhere near their ante-war level.

SPEEDING UP FALL PLOWING

During the recent tractor demonstration held at Aberdeen, S.D., one of the most interesting events was the night plowing done by the Cletrac. The plowing started at 8 o'clock in the evening and finishd at 8 o'clock the next morning and at no time during the night was there a period when there was not a crowd of farmers on hand watching the work. During the ten hours of actual plowing time, a little over six acres were plowed, demonstrating the entire feasibility of night work during rush seasons or during hot weather when it is more pleasant to work after sundown.

THE fall is a good time for the farmer to order, because it's just after the hay-tool season, and he can state what his requirements will be for the coming year. Also, if the dealer has a stock on hand he will be able to make more sales. Not enough dealers push the hay tool line in the fall; it should be sold in the fall months just as binders are.

Why?

BECAUSE

The farmer remembers in the fall just what trouble he had with the old fork car or rod track outfit, and will decide to get a modern sling car, with slings, or even a modern fork car. Point out to him just what immense improvements have been effected in hay cars since he got that outfit of his thirty years ago. The job will be easy to erect in the fall, because the mow is full.

Some implement dealers, who are sold on the fact that they can handle—and do handle—various items of barn equipment with profit, postpone their hay-tool canvassing until spring or even summer. What's the result? Why, there is a mad scramble the last few minutes for stock, and there are bound to be the consequent disappointments.

Some dealers

NEVER LEARN!

Every summer they waste a fine slice of profit, telephoning or telegraphing for hay tools, and paying express charges for delivery of items of stock which should have been ordered ten months previously, for delivery in the spring.

WITH OUR READERS

Editor, M. T. I.—If you want to help us dealers, get them to find the cost of doing business in various parts of the country, and help them to obtain a margin from the manufacturer which enables each man to show a profit. You should reduce your page to a more convenient size—magazine-size—for filing.

Editor's Note: We'll be glad to have the writer of the above forward his name and address; he forgot to sign it in his communication to us. Most readers, we may say, like the large size better; it gives more opportunity for display, and the general trend of magazines and trade papers during the past few years has been in this direction.

* * *

The series of articles we are now running on the implement dealers' problems is designed to help obtain more adequate margins.—Editor.

The Life of a Tractor

By B. J. PAULSON

Donald McDowgan, Greenshields, Alta., bought this tractor second-hand, has used it four years, earning $6,000, and says: "We believe it is worth more money now than when we got it."

IT was Sir Wm. Osler, I believe, who won undying unpopularity by declaring to the world that three score years was the outside limit of a man's usefulness; that at the age of sixty all male survivors of old man "Time's" scythe should inhale chloroform and quietly shake their burden of years into the dust. His theory was probably all right as far as it went but the chief trouble seemed to be that it didn't go far enough —it fell short by about twenty years. He must have slipped up on his figures somewhere when you stop to consider the captains of industry and finance who are only seventy or eighty years young and still going strong.

But anyway, far be it from me to follow Osler's most unillustrious example in the matter of evolving theories on life, whether it concern man or tractor, even though based on water-tight, scientific facts. Just take the matter of tractors, for instance:

Some mechanical "Oslers" have had the temerity actually to fix the period of a tractor's usefulness—in years and even hours, mind you! But—do these theories hold good in actual life? They do not! We may establish a tractor-life standard of say, 5,000 working hours, which is supposed to be the tractor's limit of usefulness—but the tractors, just like the men who refuted Osler's theory by concrete example, live past this life standard.

The nearest that we can come to figuring out a tractor's period of life is through a survey of manufacturers' and owners' responsibility. We boil it down to a fifty-fifty proposition divided equally between the manufacturer and the owner—or operator.

IF the manufacturer puts good quality material into his tractor, has it built and assembled by expert workmen, carries out a system of continuous inspection covering the entire process of manufacture, tests the finished product and inspects it carefully for any possible flaws before shipping it out, and finally properly instructs the purchaser in the proper care and operation of the tractor, backing up the whole with prompt efficient repair service—if the manufacturer does all these things then he has lived up to his responsibility.

If the owner—or operator—follows the instructions of the manufacturer in the care of the tractor, that fulfills his responsibility. The rest is up to old man "Time"—and the number of years the tractor will give good service may be ascertained just as definitely and accurately as determining the age at which a man's usefulness ends. Let us look into the histories of one or two tractors and see what the tractor owners have to say on the subject:

Back in 1912 Harley Ferriss, of Dropmore, Man., invested in a 12-25 H. P. tractor of a popular make and after using the tractor for seven consecutive seasons Mr. Ferries writes:

"The tractor was put to work in 1913, and since that time it has plowed 1600 acres, and has threshed 200,000 bushels of grain, and disked, floated and harrowed 200 acres of breaking. I have found that the engine has always had ample power to handle 6 bottoms in stubble and 5 in breaking, under all conditions which are to be met with here, and have found it a good and also economical kerosene burner, and I have seldom used more than 2 gallons of kerosene per acre.

"As for repairs, I have probably paid out about $200 altogether for the engine. At the present time, I should judge that, by spending about $200 in repairs on this engine, which would include a new bull gear, bull pinion, piston rings, babbitting front wheels, and some other small renewals, *it would be practically as good as new, and ready for another six years' work.*"

So according to this owner, we find here a tractor the life of which is estimated at thirteen years. Incidentally, any tractor that has plowed 1600 acres of land and furnished power for threshing 200,000 bushels of grain with only $200.00 for repairs during its seven seasons' service, has certainly paid for itself well.

AND in Alberta we find another tractor with a seven-year record— and still going strong. It is owned by L. B. Wallace, a farmer of Heath, Alta. He bought the tractor second-hand after it had seen three seasons of sod-breaking service in Alberta and, using Mr. Wallace's own words, this is what the tractor accomplished up to the close of 1918, in his service:

"In the summer of 1916 I broke 260 acres, and my expenses for breaking the 260 acres were $1.75 for new electrode for the engine. I broke 175 acres on my own place with 10½ barrels of coal oil, and 40 acres on rough hilly land with 4½ barrels of coal oil and 20 acres on light level land with 1½ barrels odf coal oil, and 25 acres on light hilly land with 2½ barrels of coal oil, and I used about 1½ gallons of cylinder oil per day. And on the 260 acres I averaged 10¼ acres per day.

"This outfit is a 15-30 International single cylinder engine. I used a 5-bottom engine gang low and I hauled the 5 plows breaking except the 40 acres I broke on very heavy hilly land. And in the fall threshing I threshed 38,000 bushels of grain and in this district the wheat was frozen, so I had a lot of hard threshing and few bushels, and my expense for repairs was $18.00 for crank box, which was my fault, as I had the oiler set too close for cold weather.

"The size of my separator is a 27-42 self feeder and blower. In 1917 I broke 140 acres of heavy hilly land. And in the fall we threshed 15,000 bushels. It was a very poor crop here on account of dry weather; and my expense for repairs was $18.00 for new crank box, as dirt got in the feed and stopped the oil. In threshing good heavy straw I use from 30 to 35 gallons per day of coal oil. In the fall after threshing I plowed or back set 175 acres, and I used 4 engine plows, 14 in. and one common gauge 24 in.

"In 1918 I broke 170 acres of very heavy land and plowed 60 acres of summer fallow and 110 acres of spring plowing using 4 engine plows and one 24 in. gauge and one 28 in. gauge. In the fall I was out threshing ten days, as the crops in this district were a total failure on account of frost and dry weather.

"And in the three seasons I used the outfit, my expense for repairs was $112.75.

"My outfit is still in good shape and with proper care and handling it will last a long time yet."

You will please note that Mr. Wallace concludes with the statement that "My outfit is still in good shape and with proper care and handling it will last a long time yet." Apparently, therefore, the life of this tractor is very indefinite—its eventual demise too distant even for a hazard as to the date of its future departure from its sphere of usefulness.

AND then in Manitoba, we learn of another "old-timer" that refuses to be chloroformed or put on the shelf in spite of the burden of years and labor it has accumulated since W. J. Parker, of St. Claude, bought it in 1910.

This is what Mr. Parker says about his tractor:

"I purchased a 20 h. p. International tractor in 1910. As I have no time to run an engine myself, I hired a man to run it. He never even saw a gas tractor and never had anything to do with any gas engines previous to unloading this one off the car here. We broke 531 acres of scrub land and made the price of the engine clear of all expense the first season. We also purchased a 28-inch thresher in the fall and made the price of it clear of all expense.

"I purchased a few gears and one new piston and a few small parts for this engine and consider it practically as good as new to-day.

"This engine has been used every year until 1918, and it was only laid up on account of the scarcity of labor. *I expect to use it to break scrub land with this summer.*

"In 1911 we farmed about 350 acres, altogether with this engine. We had only one team of cheap horses on the place.

"In 1912 we farmed about the same amount of land, but used a 4-horse team in the seeding as some of the land was too wet for this weight of engine. Since 1912 we have used it for breaking, plowing and cutting grain.

"In 1910 we hauled two 20-inch scrub plows. In 1911 we hauled two 24-inch scrub plows for a month, but found them too heavy, and since then have hauled one steel scrub plow only when breaking. When plowing stubble, we hauled 14-inch bottoms with a packer or harrow behind. When cutting, we hauled two 8-foot Deering binders. We might have hauled another, but I only had the two."

Mr. Parker neglected to make any mention of when he expects this tractor to die. He merely speaks in the present stating that: "I expect to use it to break scrub land this summer," conveying the impression that the tractor is still practically as good as new.

While we are at St. Claude we find another "unossified" tractor that is still making good and apparently young in service at this time, although Alcode Furetz, the owner, has been running it since 1911, operating a 24-42 thresher and attachments, grinding feed, etc. Mr. Furetz says:

"In reply to your letter I will say that the tractor referred to is a 20 h. p. International and was bought in the spring, 1911. I have used it every year thresh-

Harley Farriss, of Dropmore, Man., has plowed 1,600 acres of land and threshed 200,000 bushels of grain with this tractor since 1913. He says that with a few repairs "it would be practically as good as new and ready for another six years' work."

John Thordarson, Langruth, Man., bought this tractor in 1910, has plowed more than 2,000 acres of land with it, threshed approximately 360,000 bushels of grain, travelled 650 miles over rough roads, and says: "I don't think this engine will ever wear out."

Alcode Furetz, of St. Claude, Man., has used this tractor every season since 1911, and says: "You could not see any wear in the gears of the engine yet, in fact, any place."

ing and running a 24-42 separator with all attachments. I do not know the number of bushels threshed but I was out every year from 25 to 30 days actual threshing. I also ran a 12-inch grinder with it and crushed all my grain and a lot for other people.

"You could not see any wear in the gears of the engine yet, in fact, any place. The original rings are in yet and they do not show any sign of wear. Regarding repairs, I have bought four intake valve springs, about as many igniter springs, a water pump plunger, an intake valve (the stem of the first one broke), and a few igniter points. You can see that my repair bill is pretty small."

Now, how in Sam Hill are you going to figure how long a tractor will live when an owner uses his rig eight seasons and then says: "You could not see any wear in the gears of the engine yet, in fact, any place. The original piston rings are in yet and they do not show any signs of wear."

And there is John Thordarson's 20 h. p. "Old Reliable" up at Langruth, Man. Mr. Thordarson got his tractor in 1910. He says:

"We have broken 500 acres of land with it and plowed about 1,600. We have threshed every fall with it and have averaged about 40,000 bushels a year for the nine years that we have had the outfit. On account of the district being pretty scattered, we have had to travel a great deal with the outfit during threshing time. In all I think we've travelled not less than 650 miles or perhaps more for we travelled over one hundred miles in each of the first five falls that we had the outfit."

Let's see—threshing at the rate of 40,000 bushels a year for nine years, that makes a total of 360,000 bushels, doesn't it? And while meandering about from one job to another this tractor travelled 650 miles. Not a bad record for a 20 H. P. tractor, is it, to say nothing of the plowing it handled between times. Mr. Thordarson states that he spent about $100.00 in repairs on this tractor up to the close of 1918 and concludes with the statement that:

"I don't think this engine will ever wear out."

WE wonder—what would Osler say in a case of this kind—if he had specialized on tractors instead of men?

We skip back into the broad spaces of Alberta and find there the sturdy 12-25 tractor of Donald A. McDowgan which he bought second-hand after it had been sadly misused for three years. Mr. McDowgan says of this tractor: "Well, we have had our outfit four years *and we believe it is worth more money now than when we bought it.* We can break four acres of heavy roots in one day or fifteen acres of clear, open land. We sometimes run fifteen or sixteen hours a day. I don't know the breed of horses that could stand this long a day. The engine has earned $6,000 without expenses since we got it."

You see, here is another case that refutes the "limited life" theory, for Mr. McDowgan says he thinks his outfit is worth more money now than when he got it.

And over in Saskatchewan we discover, not far from the town of Marshall, an unheard of thing—a tractor heirloom—or a prospective heirloom, at any rate. It is a 20 H. P. tractor of the vintage of 1910, at which time it was purchased by E. J. Willard, the present owner. Mr. Willard has used the tractor every season since, breaking prairie sod, plowing stubble, summer fallowing, disking and threshing, and says, referring to the latter: "That fall we threshed 38 days (after breaking 300 acres of land), finishing December 24th, about 30 degrees below zero. The most of the time she was pounding through frozen wheat—long, rank, tough bundles. Believe me, this takes power. She has threshed every fall since, last fall being her ninth season, altogether making a total of 200 threshing days, going over long, rough roads."

Mr. Willard proves that h eis a practical optimist by concluding:

"From the looks of her the way she ran last fall (1918), I shall have something to pass down to my grandchildren."

In the face of such testimony as this, what is there left for the statistical hound, mathematican and theorist to say about the life of a tractor? I'll say—nothing.

Do You Like a Good Fight? By E. H. SCOTT

"The Tractor Dealer in a New District has a Fight on His Hands," Says Bee Clark, Balcarres, Saskatchewan

WHY are tractors so popular in one section of Western Canada and not in another?

Bee Clark, a hustling implement man at Balcarres, Sask., rises to make answer.

"It is because," he says, "there must be an active educational campaign introduced, and some real pioneer work done before the farmers can be converted to the new style methods of farming. Placing tractors on view in implement sheds will not do it. The farmer has got to be shown that he can effect an economy or make more money by the use of tractors than by the use of horses.

"When a dealer attempts to introduce the tractor in a new district, he has a fight on his hands. He has to show his farmer friends that the tractor is a paying proposition. To do this he must get the machine out on the land. He personally must see to it that it is kept in operation and that it makes a record in economy as well as in the amount of land plowed. It is largely on the result of the experiments conducted by their neighbors that the agriculturists make their decisions, and their purchases.

"The point is," Mr. Clark continues, "to get a tractor that will do the work, a tractor in which you have confidence, and get as many of them on the land over a wide section of country as you can, even at a considerable sacrifice. In every case the farmer must be instructed that he has been given a very special offer in return for his services in conducting certain experiments and keeping certain records with regard to the number of hours worked, the amount of land plowed, the amount of gas and oil consumed, etc. He must figure out a comparison of the work accomplished with that performed under the old system of using horses.

"The result of those experiments, if they are successful, must be advertised in the local newspapers, and given to every farmer in the district by personal letter."

One farmer to whom Mr. Clark sold a Fordson tractor, a man named E. Konold, of Balcarres, found by keeping close check that his oil and gas were costing him only 77 cents an acre, and the statement of this reliable owner went a long way toward making other sales.

EVERY argument in favor of the tractor must be studied, including the figures compiled by the manufacturer to illustrate the advantage of the tractor over horses. A very clever argument was put forward by an implement dealer at Stavely, Alberta, handling the Rumely Oil Pull tractor. He pointed out to a prosperous farmer in the district that he could plow an additional 75 acres with the machine that year, and pay for it in one season. The farmer not only succeeding in putting the 75 acres under crop, but at the advanced age of 65 years, plowed 79 acres of summer fallow for a neighbor, using only 155 gallons of kerosene. His experiment and his record economy in fuel went a long way to convince other farmers in the district as to the advisability of going in for tractors.

In the case of this last farmer, an interesting statement is made by E. Bailey, travelling salesman for the Rumely Company. He states that his prospect was one of several in the district, who had been consistently supplied for several months with literature mailed to him direct from the factory. The agent closed him in ten minutes, said Mr. Bailey. During the long winter evenings at home he had read and studied every detail of this tractor's operation, and when they have done that, he says, they have one tractor definitely in mind for future purchase. Mr. Bailey went on to say that every agent of his company in Western Canada is expected to send in two lists of names to the head office, one of them a preferred list of actual prospects, men who have made enquiries and who are in the field to buy at some future date, the other a list of non-preferred, being farmers in the district who are prosperous, and well able to afford a tractor, but who are not yet educated to the point of investigating or buying. An additional supply of literature is sent to the agent.

MR. Clark, the Balcarres dealer, is of the opinion that every automobile owner is an exceptionally good prospect for a tractor. The sale of thousands of motor cars in Western Canada, he says, is the forerunner to the sale of thousands of tractors. It is only rarely that he sells a tractor to a man who has not previously owned a car. These men are more easily impressed with the fact that the tractor is speedier than horses, and they can be used longer hours in the extreme heat of summer—night and day if necessary—and that there is no expense of maintenance during the long winter, as in the case of horses. Apart from everything else, the difficulties of cleaning, feeding and harnessing horses does not appeal to the man who has had experience in driving an automobile. A small tractor can now be purchased for the cost of a four-horse team.

This dealer conducted a tractor school at Regina for the International Harvester Company during three successive winters, and he plans to conduct a private school on his own account in Balcarres this coming winter for those who have purchased tractors or those who contemplate buying. He feels that it would be time well spent, for the farmers who have taken the course would be then able to call him up on the telephone and talk intelligently about their tractor troubles, instead of asking him to make long trips into the country to repair little defects that could be remedied in a moment with the aid of a little experience.

Mr. Clark tells of a short course for automobile owners that has been established for several years by the State of Iowa, in connection with the State College. He believes that the Western Canadian Provinces could with advantage inaugurate a short course in motor mechanics for farmers.

HAS CONQUERED SOME "TOUGH" ROADS

Western Canada is on the eve of going in heavily for trucks. This is the statement of garage and implement men all over Saskatchewan and Alberta. They base their judgment on the number of inquiries that are coming in from farmers.

Here is a picture that illustrates the serviceability of the truck on Saskatchewan roads. This is the Hudford 1½-ton truck unit, manufactured by the Commercial Car Unit Co. of Philadelphia, attached to Ford power. It has run more than 8,000 miles over all sorts and conditions of roads. In the early stages of its history it was used by the agent, whose name it bears, for canvassing purposes in the country, but for the last year has been used for hauling heavy machinery and gasoline in the district surrounding Leader, Sask.

It is now owned by Messrs. Graham and Erskine, who have recently taken over the garage shown in the picture from H. F. Stiles. Painters were about to place the names of the new owners on the building.

Mr. Erskine stated that he often brought a ton and a half of oil on the truck from Prelate, the next town, through roads that were deep in mud, and came through "on high" all the way. He is a firm believer in the use of the motor truck for farmers and is looking for a line to sell.

Bombard Your Prospects With: *"Winter Overhaul!"*

Keep Your Garage A-Hummin' During Next Few Months

By A. M. GLOVER
GODERICH, ONTARIO

MOST repairmen seem to think as soon as Labor Day has passed that they can prepare for a long rest and that they must be content to spend the little profit they made in the summer paying running expenses during the slack season. There is no logical reason why there *should* be any slack season in the repair shop. There may be some little justification for a slack season where refrigerators or heaters are sold, for these can be sold at the right season only, unless a "king pin" of a salesman is handling them, and all of us can't be "king pins." As long as machinery is used, a repair shop SHOULD be busy. I will relate what have proved to be a few good plans.

We will "operate" on the farmers first. You will be called out quite often now to do some little job on his gasoline engine or tractor. When you are out at his place and doing the work make a point of looking over the whole machine and noting what shape it is in; draw his attention to what is self-evidently in need, or shortly will be in need, of repair. Then, if you have a chance, look over his other possessions and point out loose or worn parts and tell him that it would be a good idea to get this or that machine into your place before the roads are blocked with snow. You will do the work during the coming winter when parts are easy to get; you can give him a better job, being able to complete each job without straying away to others more pressing; you will keep his machine under cover till next spring and it will be all oiled up and in first class shape when he needs it.

Every time after this that you see him hammer these facts into him. Don't be afraid to do this and you will be surprised how many men who had no idea of putting their machines in this winter will come along with a bunch of work that they know needs doing. They are putting it off just because nobody has ever suggested that they have it done in the winter.

LETTER NO. 1

Dear Sir:

What would it be worth to you to have the assurance that your machine would run the season through without being laid up for repairs? Quite a lot, wouldn't it?

Every machine is liable to "lay down" at times, no matter how carefully it is tended, but we can REDUCE THIS LIABILITY TO A MINIMUM, if you will let us go over it to locate likely causes of trouble and replace parts that need it. The best time for you to be without your machine is the winter, and it is at this time that you can get the best job for less money than you will pay for odd repairs that otherwise will have to be done when you need the machine, in the worst possible way, next summer.

In the winter, once a man starts on your job, he does not leave it until he has finished, for there is no transient work to call him away. Thus you are assured that you get the full benefit of ALL the time you pay for.

Another strong point in your favor, and one that accounts for a great deal of our success in repair work lies in the fact that we use nothing but GENUINE FORD PARTS DIRECT FROM THE MAKERS of the particular car needing them. Substitute parts could be obtained at a much greater profit to us in the first place, but the service to the owner would be nothing like the genuine parts we give.

Again, you will know from the fact that we have been doing the same class of work in the same place for the last —— years that they will be put in properly. Do you realize that a single nut left loose, or a cotter pin omitted, may mean the ruination of your engine, transmission or axle?

When these facts are borne in mind, no owner will be satisfied to leave his car for repairs when there was any doubt as to the ability of the workman, and our reputation of —— years speaks for itself as to the quality of work we turn out.

When you bring your car in, it will be stored in a fire-proof, steam-heated garage and should you wish it to remain after the work has been done, you can leave it with us until the roads open up and be assured that every care is being taken of it.

Come in the first opportunity you have and we will give you an idea as to what your machine really needs, and the cost. Telling you this will put you under no obligation whatever.

Yours for a reliable car next year.
Blank & Blank.

Just think what the farmer has that needs a repairman's attention. In the first place he has, as a rule, a car of some description—the older the better for you—; then occasionally he has a tractor. Practically every farmer has a gasoline engine, and as for implements that need repair—why he throws enough out, before they are worn out, to make him rich, if he only knew it.

If he accepts a trifle for his old binder in trade on a new one nine times out of ten it could, with the addition of a few new parts, be made to do *at least as good* work for some years. Even when he gets the new one why not persuade him to have the old one fixed up so that he could work an extra outfit, and probably save a good deal of his crop, by getting it in just at the right time?

This does not apply to any one machine—it applies to nearly everything, from the wheelbarrow to the tractor, and while you are doing good for yourself you are also saving money for the farmer. The whole thing is to keep on hammering "WINTER OVERHAUL" into him every time you see him, or when he has a breakdown just when he needs his machine badly.

In addition to talking to the owner you should keep a note of what you think each man needs doing and once in a while send him a letter pointing out the advisability of deciding on getting this work *started*, at any rate, and also perhaps giving him some idea of what the cost will be. If he is a little hard up for funds take his paper, for you can take this over to the bank to cover the costs of parts if you need to, and to help out on running expenses and wages. If you have been able to "carry on" other winters without this work it will be like velvet to have this extra work to fill in yours or the man's time.

LETTER NO. 2

Dear Sir:

What would it be worth to you to have the assurance that your machine would run right through the season without being laid up for repairs? Quite a lot, wouldn't it?

Every machine is liable to "lay down" at times, even though it receives the best of attention, but we can REDUCE THIS LIABILITY TO A MINIMUM. The best time for you to be without your machine is the winter, and it is at this time that you can get the best job done for less money than you will pay for odd repairs that you will have to have done next summer, when you need the machine in the worst possible way. In the winter, once a man starts on the job, he does not leave it until it is finished, for there is no transient work to call him away, and you are assured of getting the benefit of all the time you pay for.

Then, should any parts need replacing, they will be replaced with the GENUINE ARTICLE, for our business being solely SERVICE WORK, we are in a position to secure parts for ANY MAKE OF MACHINE, and you fully realize that there can be nothing better than these.

The fact that we have been doing exactly this same class of work for the last ten years speaks for itself, and when you realize that a nut left loose, or a single cotter pin omitted may ruin your whole engine, transmission or axle, or even be the means of risking not only your life but the lives of all those who ride with you, you certainly will hesitate to have your work done by men without a record for reliability. You are the sole judge as to what a record of ten years in the same place, with business growing every year, stands for.

Then there is the battery to look after; we can take good care of this, and do any necessary repairs, just as well as the mechanical work. You can get the whole machine attended to, from tires to top, and it will be ready for you when you need it. If you don't need it directly it is ready it will be stored in a clean, fire-proof, steam-heated garage until spring, free of charge, and you can be assured that every care is being taken of it.

Come the first opportunity you have and we will look your machine over, show you what it needs and tell you the approximate cost. This will put you under no obligation whatever, to have the work done.

Yours for a reliable car next summer.
Blank & Blank

You know the general run of work for farm needs and even though you are not sure a certain man needs a particular job done, you know that every farmer uses the same run of machinery and you can get up a letter that will cover his general needs and mail it to the whole bunch. Don't miss the fellow that doesn't come to you. He's just the man you want to get, suggesting things he should have done.

It sounds easy to say "get up a circular letter," but some of us cannot get the "kick" into our letters that we would like to see.

To give you some ideas to help out on this point why not follow out the style of letter No. 1 shown on this page? It has pulled big results. Sit down, make out a list of all the farmers you know that own Fords, alter it a little here and there to suit your place, but leave it, in the main, just as it is.

Send it to a radius of, say, twenty miles and if each 100 letters bring you only one job you would be well paid for the trouble, but they will bring you lots more than that. Besides, you don't know where the advertising will cease, as a man getting one of your letters, hearing another man asking where he could get this style of work done, will immediately think of your place and say: "Why, a fellow was writing me about doing that for me a little while ago; now, who was it? Why, I know; it was that fellow in Blanktown; take it there and try him."

These are positive facts, for I send out hundreds of these letters each fall and we keep running ten hours a day all winter with a full gang. Right now we have enough work lined up to keep us busy most of the time to the end of January and we haven't yet sent out the full series of letters.

The big trouble with

LETTER NO. 3

Dear Sir:

Most of your outside work on the farm has been finished; you have said "goodbye" to the binder, the drill, harrow, manure-spreader and a lot of other machinery. Did you put it in the barn, clean it up, put in the new parts that are needed before it can be worked next year? Did you get the tractor fixed up? The gasoline engine that has been balky all summer, put into shape? New bearings or old ones fixed up in the buzz saw? Cutting box? or blower?

You know this has to be done eventually, just as sure as you will have to use these machines next summer. Why not have it done this winter? Winter is the logical time to do this class of work. We can stay right on the job until it is concluded. We can get any parts needed much easier than when everybody else is hollering for them, just as they want to use their machine, and when the job is done we can oil and grease your machine all over, leave it in first-class shape and ready for IMMEDIATE USE next summer.

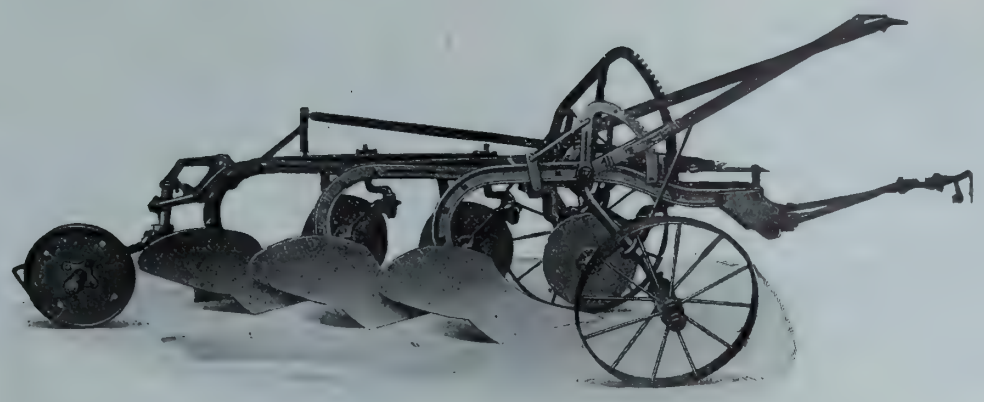
How would it be to let us go over your machinery, show you what parts and work are needed, the approximate cost of same, and how long it would take? This would put you under no obligation, but it would mean that if you followed out our suggestion, you would not be laid up for repairs right in the middle of your work next summer. Your machinery would be one of the least of your worries, whereas now you know you are always thinking: "Will she hold out till I'm done?"

You have known us for a long time and you are the sole judge as to what the fact of doing business at the same stand and with an increasing business every year stands for.

Ring us up or call in and we can get right down to figuring and let you know the result.

Yours for machinery kept in good repair.

Blank & Blank.



Handle the Hamilton Tractor Plow

A Better Implement Does Not Exist

The **HAMILTON TRACTOR PLOW** scours under adverse conditions. It turns a smooth furrow and provides a compact seed bed, putting all trash in the bottom of the furrow. A wide range of close adjustments enables the operator to turn a furrow of the exact depth required. When opening the field, the front bottom can be adjusted to turn a furrow of any depth.

This is the power-lift plow—the tractor furnishes the power to lift the plow. A slight pull on the rope by the operator from his seat raises and lowers the bottom—a very simple and easy operation. The lift is high with good clearance. Levers which are long and convenient are in easy reach of the operator and govern plowing depth.

The **HAMILTON TRACTOR PLOW** is substantially built throughout. The beams are exceptionally heavy, of high-grade carbon steel, rigidly fastened together by heavy braces. Two or three-bottom sizes. The hitch has good range of adjustment up and down and sideways. Careful protection is made against dust getting in to wear the bearings. Wooden break pin minimizes danger of damage to plow.

Implements as well made as these are the sort that sell well. Purchasers of **HAMILTON TRACTOR PLOWS** have for years known plowing satisfaction and will influence good plow purchase in the years to come. No better implement exists than the Hamilton. Write the nearest address below for complete information.

INTERNATIONAL HARVESTER COMPANY
OF CANADA LTD.

WESTERN BRANCHES — BRANDON, WINNIPEG, MAN., CALGARY, EDMONTON, LETHBRIDGE, ALTA., ESTEVAN, N. BATTLEFORD, REGINA, SASKATOON, YORKTON, SASK.
EASTERN BRANCHES — HAMILTON, LONDON, OTTAWA, ONT., MONTREAL, QUEBEC, QUE., ST JOHN, N. B.

too many garage men is that they seem afraid to go after the fellows who don't come to their place. They're just the fellows you want to get after, as the old timers will stay with you if you use them right. Get out either by letter, circular, or personally, and try and corral some extra business besides the usual run that comes to you.

ON this page are shown five letters that will make a powerful series if you will only get them out to as big a list as possible. Send out more than you think necessary, rather than too few, to go far enough around and if you want to do it at as little a cost as possible you can send them in unsealed envelopes for 1c postage, but the 3c rate gives them a good deal better appearance.

Get your local printer to set them up in imitation typewriting with violet ink, and print them on your regular letter heads. Sign each one individually as this carries a lot of weight and does away to a great extent with the "circular" appearance of the letter. Don't jam all kinds of advertising matter into the letter; keep the man's mind on the one thing, and that is *"that he have his machinery overhauled THIS WINTER."*

LETTER NO. 4

Dear Sir:

Winter isn't here but it is just around the corner and you know what that means. It means, more than likely, that bad weather will set in and the roads be impassable for a long time, and you don't want to have to wait for your car next spring when everything is moving. Why not DO NOW what you have been thinking of doing for the last month or so?

You realize, even if you don't DO it, that the winter is the time to give that machine of yours the overhaul it needs and by doing this you are bound to be money and time ahead. For the few more days of good running weather that we are likely to get, it isn't worth risking having to put off this work till next spring when the rush is bound to be on.

Our shop was never in better shape to take care of your work than it is at the present time and everything is ready to put your machine into such shape that you will be able to say next summer: "She's some boat; never gives me a minute's trouble."

Anyway, drop around and look over the place and the work going through. We might be able to give you some pointers which would help you in operating your car.

Yours for a car put in good shape from tires to top this winter.

Blank & Blank.

LETTER NO. 5

Dear Sir:

Winter is here, the storm windows should be on and the furnace in good shape. Anyway, our steam boiler is working great and our workshop is cosy and light.

The roads are bad, but not too bad yet to get in. Why not step right out now and get your machine to a place where it will be warm and put in good shape ready for next spring? Just think: only twelve or fourteen weeks and the trees will be green with new leaves and you will be wanting to run the machine. If we have been over it you will be able to take advantage of the first fine spell, but, if not—? What disappointment you will have in watching others getting around while waiting your turn to get your machine fixed during the SPRING RUSH!

You all know about our place and the kind of work we do, and how much you will save by having one GOOD JOB done NOW, rather than a host of small repairs next summer, to say nothing of the inconvenience of being without your machine, so why not get in, the very first opportunity, for the next may be your last before OLD KING WINTER CLOSES RIGHT DOWN ON YOU and you will be unable to get the car in under its own power.

Yours for one more fine day so you can get the machine in, to be put in good shape for spring—which is not so far away,

Blank & Blank.

When you get him in for this you can sell him all kinds of goods, but wait until you get him in before you switch his mind into other channels. You will scare him off just as sure as you try to sell him something that he does not need. Your idea is to get him to keep you busy this winter. Work to this end; don't mix up something you hope to sell next spring with business that is everything to you right now.

Send out No. 1 letter to every man owning a Ford car and by the same mail send out No. 2 letter to every other car owner that you know. Then to those owning machinery but no cars send out No. 3 letter. Get them all away at once and don't expect the street to be jammed with work waiting to get in next day or next week; this will be just a starter.

The main business of these letters will be to give your "victim" a jolt and let him know that you are alive.

Every time you see one of the men to whom you mailed these letters, just remind him that you are expecting his machine in shortly, and that he is not to leave it too late so that the roads will be blocked, as it will keep quite as well in your shop (if not a good deal better) than in his barn, or lying out in the field. Give him the impression that you are taking it for granted that his work is coming to you, even though you are not sure of this yourself. But whatever you do, don't knock your competitors; it's the worst thing you can do. If your man says: "Oh, I can get that done a lot cheaper over at 'So and So's'," don't say "he's no good," or "he won't do it right," or "he'll use poor material."

POINT out to him that your charges are as low as they can be if he is to get a job that will be satisfactory; that you use the best of material and that you have a lot of old customers who have found your charges very reasonable or they wouldn't have stayed with you for so long. The old saying, "Every knock is a boost," was never truer than it is to-day and especially in the repair business.

About a month after you have mailed these first letters to all of the prospects of whom you can think, mail number 4 to all of them, except those you have got lined up and their work in.

Follow out the same routine as before, getting the letters printed in imitation of typewriting. Sign each individual letter, mailing it BY ITSELF and perhaps in a plain envelope, as everybody will open a plain envelope, but a man who gets a heavy mail often passes over a letter that he knows is a circular. As your previous letter did not interest him enough to get his business he might pass it up without opening, saying: "Oh, I guess he is after that job again." The big thing is get him to read your second letter and make it strong enough to make him take notice. But, no matter how strong it is, it is useless unless he reads it, so I always found it a good plan to send out these letters in plain envelopes. Then they are almost bound to be read.

IN about another month get out the No. 5 letter to all of those who have not been eliminated by the previous ones and it might be the means of stirring up a few of the laggards, and it is a "clincher" anyway.

The whole thing to remember is not to expect too much from your letters. If you get business from five per cent. of the people to whom you write you will make a handsome profit on your outlay and you must back up your letters by talking WINTER OVERHAUL every chance you get.

Some men send out letters and then seem ashamed to own up to them. You should feel proud of them and let the men to whom you send them know that they are practically *personal* letters to them, for their special benefit.

Go to it now and give this plan a try out and you will be surprised at the result. I know you will get them for I have got them myself. If these letters do not fit your circumstances send in full details regarding your customers and your business and I will write something for you that will fit your case.

Keep Your Good Men Busy the Year Round

By F. H. SWEET

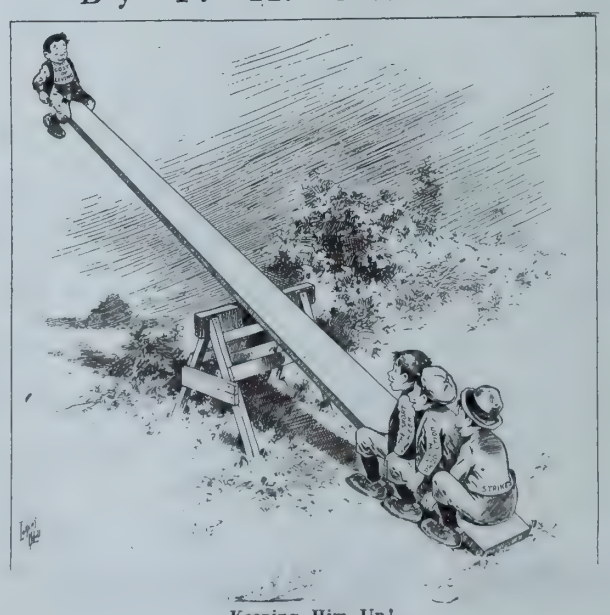
THERE is more or less dissatisfaction among many owners in regard to the class of work that is done in the average garage. Much of this dissatisfaction can be traced to the practice in many garages of putting to work a comparatively large force of men and boys in summer and cutting down this force in the fall to the barest minimum. This results in getting together a new group of workers each summer. By the time they have become accustomed to the concern and to working with each other they are dismissed.

It is this custom also which has made it hard to obtain in a garage the type of men needed for the most satisfactory service and the most profitable business. It will pay very much better to begin to plan now to keep all the good men busy all next winter than it will to let them go as soon as business begins to fall off.

The more permanent the employment in any repair shop or garage, other things being equal, the better the grade of men that can be hired for a given wage and the more efficient the organization may be made.

This, however, is not all. To make a profit, it is just as necessary to keep down the labor turnover as it is to keep up the turnover of capital invested in the goods to be sold. One motor company has found that the decrease in labor turnover that has resulted from its high wages and welfare work has gone a long ways towards offsetting the cost of these two items.

It costs a certain amount to hire a man, and it costs something to train him, no matter how experienced he may be, for there are no two concerns that are run on exactly the same lines. It often happens that many men must be hired before one satisfactory mechanic is found. In the course of finding the right man, time, material and customer good will are probably lost.



Keeping Him Up!
Melville in "Farm Implement News."

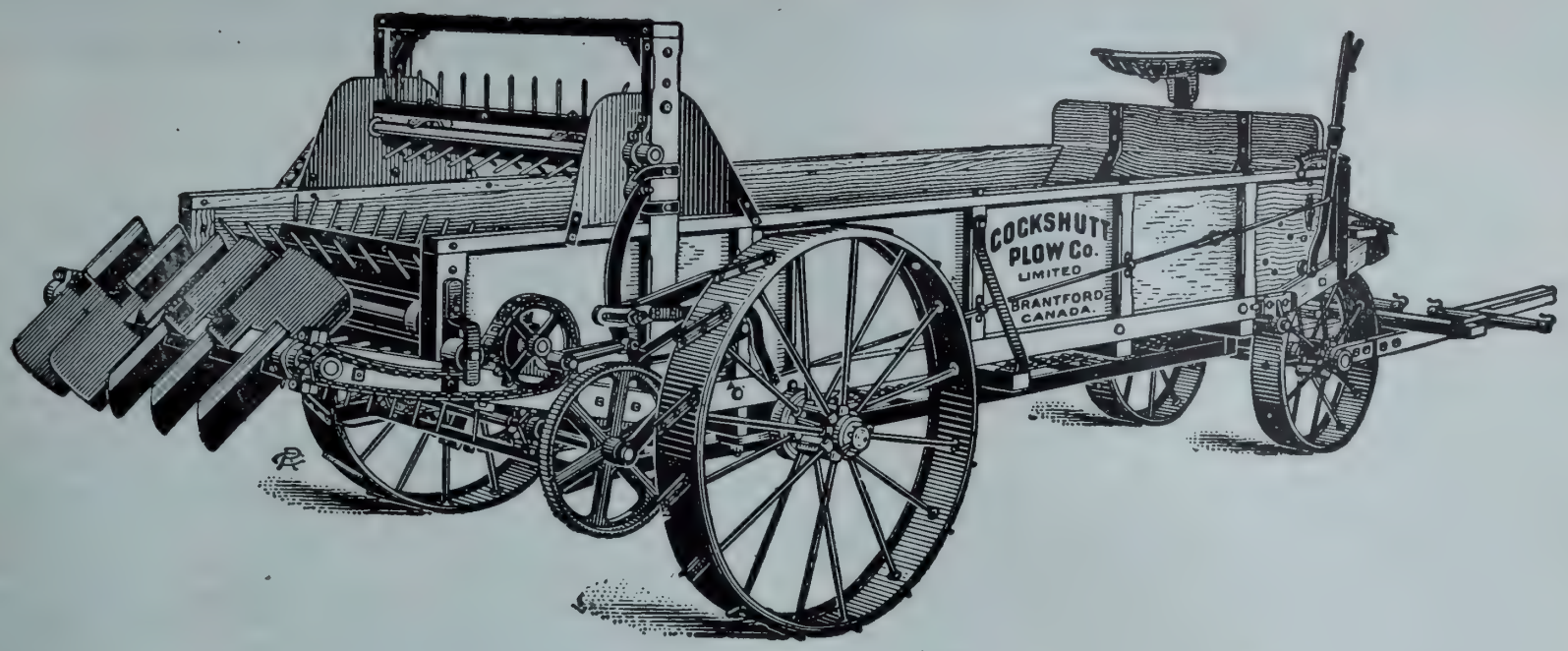
IT is these things that make it so vitally important to keep the garage and repair shop busy all winter long, and to prepare at once for winter business. In some respects the garage business is not unlike the mining business.

There are two methods pursued by miners. One is to prospect until ore-bearing ground is found, and then to concentrate all energies upon getting out the ore until the ground is exhausted, and then start in prospecting again. Some of the men who pursue this course are lucky enough to continue to make money. Most of them are affluent for a few years and broke the rest of the time.

The other method is to continue prospecting while the rich ground is being worked. Under this method miners continue to make money, they keep on increasing their wealth and rarely ever go broke. This is the business-like way of going about the business.

The prosperous garage and repair men are those who prepare a long time in advance for the dull season.

In the winter time, when business is slack, all manner of long jobs can be done with profit and at the same time be done at a lower price than they could be done during the very busy summer season. A little planning, a little effort spent in gathering information now, followed in the dull season by a little real salesmanship will result in filling up the shop, keeping the working force busy, and maintaining the profits the year round. This cannot be done, however, unless some real thought, some real planning is devoted to the problem now.



There are Dozens of Good Prospects in Your Section for a *Real* Spreader

COCKSHUTT Manure Spreader

The business-like farmer knows the value of fertilizing his acres and is fully alive to the value of that "gold mine" in his manure pile. Very often it just needs a suggestion from his Dealer to get him to consider buying a Manure Spreader. And if it's the Cockshutt that's mentioned, the chances for a sale go up 50%, because it is so well advertised and favorably known that it makes its own "prospects" in every section.

Our idea of a successful Manure Spreader is one that will thoroughly carpet the land with finely pulverized manure at a minimum expenditure of horse flesh. And we have it! Moreover—we know it must be giant-strong, simple and rugged enough to stand for years the hardest kind of service. And again; we have it!

It is built low—the top of the box is just waist-high, 41" from the ground, with 17" clearance underneath.

The two revolving, spike-studded delivery cylinders break up the lumps and are very efficient. But we go further —special distributing paddles behind pulverize the manure still more and spread it thoroughly over much more than the machine's width. Strong, direct chain drive—no bothersome gears or clutches. Feed is simple and positive, no matter how big the load. When not spreading, the machinery is not running—a handy lever does the trick. Amount spread can be readily changed by simply shifting a lever.

Cockshutt principles of simplicity, light draft and rugged efficiency are well worked out in this **real** spreader.

Let us send you a supply of literature on these machines—also on other Cockshutt Implements. Handling the Cockshutt line puts you in a position to supply ALL the needs of the farmer—and with goods that he knows have a splendid reputation for quality and service.

Cockshutt Plow Co.
Limited
BRANTFORD, ONTARIO

Sold in Eastern Ontario, Quebec and Maritime Provinces by

The Frost & Wood Co.
Limited
Montreal, SMITH'S FALLS, St. John

SHOP NOTES FOR THE GARAGE MAN

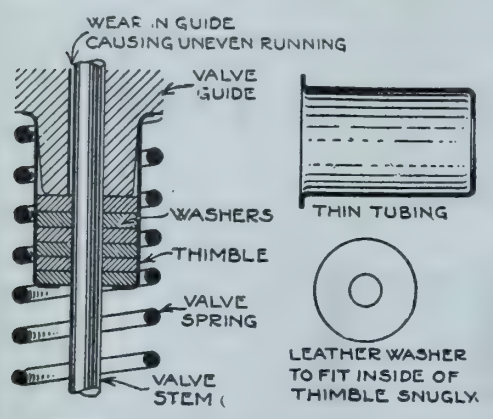
Intake Valve Stem Lubrication—Removing Grease—Cutting Steering Wheel—Locating a Leak

Conducted by SCOTT T. DUTHIE

INTAKE VALVE STEM LUBRICATION

NORMALLY an automobile engine after considerable use will not throttle down without skipping or missing no matter how well the adjustments of the carburetor are made. This condition is caused by the wear in the intake valve stem guides which makes a space for the air to leak into the chamber on the intake stroke of the motor. This dilutes the incoming gas to such an extent that it will not fire.

If the engine is to be thoroughly overhauled these guides can be reamed out for installing over size valve stems, or bushings put in place to overcome the wear. No lubrication is provided for



Lubricating Valve Stems and Preventing Inlet of Air to the Mixture.

these guides or the wear would not be so rapid.

In a local repair shop where they make a specialty of correcting engine faults they use a very simple means of overcoming this condition and providing for lack of lubrication. A piece of brass tubing of the exact inside diameter of the valve spring is cut off, making a length of 1½ inches, and this is placed in a lathe on a wood mandrel and the bottom edge spun in, cup shaped, and the upper edge is flared out. Five or six leather washers are cut to the inside diameter of this thin tubing with a hole corresponding in size to the valve stem. These are boiled in a mixture of graphite and tallow, then inserted in the tubular thimble which is placed on the upper ends of the intake valve springs when the parts are assembled.

These washers permit a smooth and even operation of the engine with a closed throttle and they last sufficiently long to prevent missing until the car comes in for the removal of carbon and the grinding of the valves, then several new washers are inserted.

LOOSE MOTOR

TWO brothers who owned and operated a tractor found it difficult to keep the engine tight on the frame. They finally asked for a service man to help them out. Their trouble was due to the plan for securing the anchor bolts. These were 1¼-in. bolts with hard babbitt metal poured about them to fill the holes and keep them tight into place. Naturally the hot babbitt filled the bolt threads. These men tightened the nuts on the bolts but did not screw down the bolts first. So in a short time they were loose again. Had they drawn the nuts tight enough they might have held anyway. When the service man came he surprised the owners by using a big end wrench with a gas pipe extension. He first tightened the bolts as tight as he dared with the big wrench, pounding on the bolt heads at the same time with a big hammer. Then he drew the nuts up as tight as he dared. The owners learned that day something about setting up bolts which saved them much trouble later. One of the important parts of good service work is to teach owners and operators to put just the right tension on bolts. Generally the dealer will find that his customers allow parts to go too loose rather than too tight.

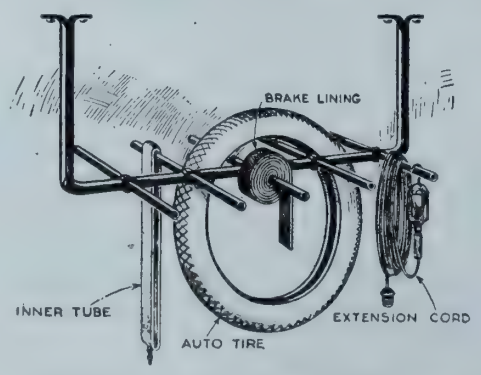
WATERPROOF GLUES

SOME of the new waterproof glues developed primarily for aircraft purposes during the war offer the possibility of overcoming a difficulty that has proved very annoying both to the automobile owner and the manufacturer, wherever linoleum is used on the running boards or as a covering on the floor of the car. Ordinary glues which are soluble in water are not very effective in cementing linoleums, and most automobile owners have soon discovered tha the glue disintegrates and the linoleum comes loose after the car has been washed a few times.

Casein glues are admirably adapted to this purpose, and if the quality is right and they are properly applied the linoleum should give no trouble during the life of the car. Casein glues are exceedingly resistant to the action of water and retain a very high percentage of their original strength, even after long immersion under water. They are comparatively inexpensive and the materials from which they are made are readily available in the market. They are applied cold and will set without the application of heat.

OVERHEAD RACK

THE type of rack here shown provides a handy place to hang spare tires and other automobile parts, and is very easily constructed out of lengths of pipe and a few bolts. The main hanger is made from a piece of 1-in. pipe, with flanges at each end to fasten it to a beam overhead. To form the flanges, saw each end of the pipe to a depth of about 4 in., bend the divided parts through a right angle, flatten them, and drill bolt holes through them. Then bend the hanger to form three sides of a rectangle, using the long side to support the crosspieces, which are short lengths of ¾-in. pipe. Cut slots in the main hanger to admit the crosspieces, and cut corresponding slots in the latter, so that they will fit snugly. Then bolt the crosspieces in position, and fasten the hanger overhead with screws or bolts of suitable size.



A Rack, made of a few pieces of pipe, enables the garage keeper to hang tires and spare parts within easy reach.

TESTING METAL FLOAT FOR LEAKS

A LEAK in a metal float of a carburetor may not be visible to the eye, although indications of its presence are quite evident. To test the float, heat a vessel of water till it nearly boils, and immerse the float. The heated air inside it will expand, some of the air will be forced through any leak that may be present, and bubbles will form at this point, showing the position of the leak.

LOCATING LEAK

ALMOST every car owner knows how annoying it is to locate a leak in some of the lines. Try as you may to replace all gaskets and tighten bolts the leaks will still make puddles when the car is stopped for a short time. Here is a way to locate the exact point of leakage. Take a piece of paper and make a centre line on it, then place it under the engine and transmission and leave it there over night. The next morning the puddles caused by the leakage can be plumbed up and located exactly. The repair can be made where it is needed.

CUTTING STEERING WHEEL

ON many low-slung roadsters the top of the steering wheel is on a level with the driver's face, and often comes directly in his line of vision. To remedy this condition, a quarter of the wheel rim can be removed, thereby permitting an unobstructed view of the road; and though the appearance of the wheel suffers a little, its strength is not impaired.

TIN SLEEVES FOR REPLACING PISTON RINGS

THERE is little difficulty in fitting a piston carrying several rings into the cylinder, if a tin sleeve is used to compress the rings in their grooves as the piston enters the cylinder. When the rings have been placed in position, the sleeve is folded around the piston and locked with a strip of tin, after which the piston is forced into the cylinder entrance, the sleeve, of course, remaining outside. In this way each ring is kept from spreading until it has begun to enter the cylinder.

A less elaborate method, which is almost as effective, is to form the sleeve from a tin can, without bending the edges as shown, and then compress sleeve and rings by wrapping a piece of stiff wire around it and twisting the ends together with pliers. This method has the advantage of not requiring a different sleeve for every different size of piston, but the disadvantage of being a trifle more cumbersome.

MOVING THAT BOLT

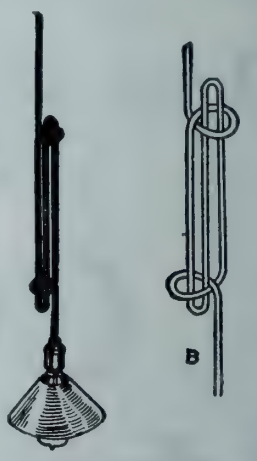
AUTOMOBILE parts that have become over-tightened, such as nuts, bolts, or spark-plugs, are sometimes very difficult to remove, especially when they have become rusted into position, and when the use of excessive force may damage and possibly cause some breakage to the parts.

If the tightened part will not loosen under ordinary pressure, pour a little kerosene at the seat of the trouble, giving it ample time to penetrate. If this does not prove successful, try the effect of heat. In case the refractory member is in contact with the cylinder, run the engine for a short while.

In other cases a blow-torch may be employed. When no blow-torch is available, a bit of waste soaked in gasoline and wrapped loosely around the tightened part, when lighted, will heat the metal sufficiently to ease the joint and permit the part to be removed.

USEFUL LIGHT CORD KNOT

WHEN the cord on a drop light is too long do not hang it over the door or a nail or tie it full of kinky nots that will take an hour to untangle. Tie it as shown at A, using a knot called a "sheep-shank." This will hold it up nicely, will look neat and can be let out quickly. The knot tied is shown in the sketch B.



A Sheepshank Knot in a Flexible Cord.

This kind of a knot will not bend the wire so badly as to cause a break in the insulation and it will not leave any short bends that make a bad appearance.

CLEANING COMMUTATORS

IT is difficult to get at commutators as a rule due to the small opening at the commutator end of a generator or starting motor. This requires that some simple tool be made to get the commutator through one of the brush holder openings. The easiest way to do this is to take the cover of a cigar box or some thin wood stock and make a small paddle about 4 or 6 in. long and about half the width of the brush holder.

To use this simple arrangement for cleaning generator commutators first remove the most accessible generator brush and then wrap a strip of No. 00 sandpaper over the end of the paddle and use it through the brush holder when the engine is running as one would use a hand lathe tool. This will thoroughly clean the commutator and do it evenly. Under no circumstances use emery cloth or electrical cloth, as emery is a conductor and will short the commutator. Shorted armature windings on most machines will make themselves known by turning the segments of the armature a blue color. One shorted winding will make two segments 180 deg. apart or one-half way around the commutator change color.

A starting motor will run under battery power when one of the brushes is removed, hence the cleaning of the starting motor commutator con be done when the motor is driving the engine. A dirty motor commutator causes arcing and heating. This is also true if the contact faces of the brushes are cut and not smooth. If this condition is found, it is best to smooth the faces of the brushes, as they will cut the commutator so badly in a short time that it will have to be refaced by taking a cut off of it in a lathe.

A Tractor's LIFE - not PRICE - determines its VALUE

What do you want in the tractor you sell?

Power? *Every Rumely OilPull will deliver more power for its size and rating than any other tractor made.* Its rating is based upon only 80% of its maximum power efficiency—a 20% overload capacity. The OilPull power plant is a low speed, heavy duty motor, built complete in Advance-Rumely factories and designed especially for this tractor, and to operate on oil fuel. The weight of the OilPull and the weight distribution is absolutely correct to realize the full power developed by the motor. Ask any OilPull owner his opinion of OilPull power.

Dependability? Actual work in the field over a period of years is the only *real* test. Ten years ago the first OilPull tractors were sold for breaking sod in the Northwest—the toughest job a tractor can tackle. And these same OilPulls have been at it ever since, giving year after year service. The first OilPull built is still on the job—over 15,000 are now in service.

The OilPull frame is of straight steel members—without bends or splices—to best resist twists and strains. OilPull gearing has always been made a bit larger and heavier than you might think necessary. OilPull shafting is the same—all of special steel—the OilPull crankshaft is built to U. S. Naval specifications. Motor parts are ground to the thousandth part of an inch. There is no better tractor wheel made than the OilPull—we've been building engine wheels for over 80 years. Oil cooling eliminates evaporation, freezing, rusting, clogging, overheating—and saves power.

Plus power and *plus* construction give the OilPull lasting qualities unequalled by any tractor. This isn't guesswork—it has been *proved*. Ask any OilPull owner his opinion of OilPull dependability.

Economy? Fuel is the biggest item of expense in a tractor's operation and oil fuel—common kerosene—is the cheapest fuel available. Real oil tractors are made, not "made over." The OilPull is designed for kerosene from the ground up—the OilPull motor, carburetor, cooling system—every part is designed and built especially for the burning of oil fuel. The OilPull will operate successfully on kerosene under every condition of work, of temperature, of altitude. And to back it up, *every OilPull tractor is guaranteed in writing to burn successfully all grades of kerosene under all conditions, at all loads to its full rated brake horsepower.* The OilPull has established the record for the lowest fuel cost. It will plow an acre of ground at less cost than any tractor built—bar none. Ask any OilPull owner his opinion of OilPull economy.

Simplicity? Simplicity and ease of operation are "inbuilt" in the OilPull. There is no complicated mechanism—all operating levers are within easy reach and all working parts, while carefully protected, are easily accessible for inspection. The OilPull design allows for high front wheels, properly spaced, to give ease in steering and operating on rough ground— and a short turning radius. A large belt pulley on the right hand side driven directly off the crankshaft makes the OilPull as efficient on the belt as on the drawbar. Ask any owner his opinion of OilPull simplicity.

Service? Service as Advance-Rumely practices it is a material part of the sale. We maintain 27 branch offices and warehouses located at central shipping points in the U. S. and Canada. At each branch is carried a complete stock of machines and parts for immediate delivery, as also an organization of trained tractor experts. Ask any OilPull owner his opinion of Advance-Rumely service.

Proper Size? The OilPull is built in four sizes, standard in design and a size to fit every need—12-20, 16-30, 20-40 and 30-60 H. P.—each capable of delivering the proved OilPull power, dependability and economy on either drawbar or belt. The 12-20 is the latest model—a small, light weight outfit. Ask for details of our dealer proposition.

ADVANCE-RUMELY THRESHER COMPANY, *Inc.*
La Porte, Indiana
Toronto, Ont.

Each Scale is Te

The photographs shown he
you of the accuracy with
Scale is built. It is carefu
weighing capacity as well
throughout the various step
No one can dispute its a
Certificate of correct weig

Renfrew Han

The Handiest S

Many a farmer has lost enough on a single sale of cattle, hogs, sheep, grain, etc., to pay for a Renfrew so it will be an easy matter for the dealers to place this truck scale on practically every farm in his vicinity.

Scores of things can be weighed on this scale; horses, cows, pigs, sheep, grain, feed, milk and cream, groceries, etc. It weighs anything from one to 2,000 pounds and can be wheeled around as easily as an ordinary truck. There is no need to lift heavy loads, simply truck the scale to whatever you want to weigh, slip the scale underneath, and the heavy load is weighed.

The Renfrew Machinery Company,

Eastern Branch, Sussex, N.B.

Other Lines—Renfrew Crean

ted for Accuracy

e of actual tests will convince
which each Renfrew Truck
y tested for end and corner
for centre, and is inspected
n the process of manufacture.
uracy, for the Government
accompanies every

y Truck Scale

le Ever Invented

The Renfrew is self-adjusting, weighs correctly on uneven ground. (A platform scale needs a level ground). It is simple in construction, does not get out of order, and is built to last a life-time.

All these splendid features should convince any dealer that the Renfrew is a real business-stirring line. One dealer actually made eleven hundred and fifteen dollars commission in one month. There are splendid opportunities ahead of you.

Write to-day for particulars. You will be interested in our agency proposition.

imited, Head Office and Works, **Renfrew, Ontario**

Agencies almost everywhere in Canada

rator. Happy Farmer Tractor

Automotive Accessories *and* Implement Equipment

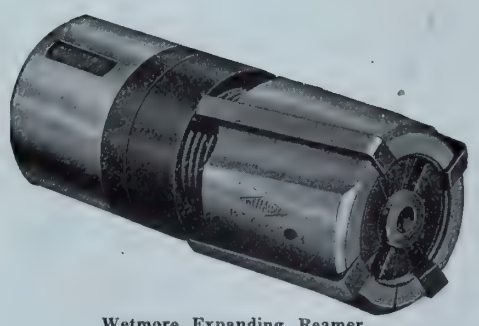
PULL-OUT CHAINS

A. B. C. Pull-Out is manufactured by A. B. C. Mfg. Co., Kansas City, Mo. It consists of four steel stakes and two pieces of chain with rubber sleeves. Makers claim that these specially designed steel stakes will hold in soft mud after being inserted by foot pressure, because this principle of anchorage utilizes ground friction, in a new way, against every link of chain and its cross members. Friction is created by a strong downward pull against the earth's surface under heavy wheel pressure. In long stretches of soft sand or mud two lengths of chain may be hooked together, staked out forward and slipped under tread of front wheels. Photograph No. 1 shown on this page illustrates a river bottom road of mud to the hubs in which this 7-passenger car lost its traction. The little 8-year-old girl restored the traction and had this big car out of the hole inside of ten minutes. No. 2 illustrates how hook-end of mud chain is fastened to drive wheel and opposite end staked out for driving automobile forward. No. 3 shows preparations for pulling out of bad mud hole backwards. Note stake being placed to allow about 12 inches slack in chain, also that stake is being driven down STRAIGHT. No. 4 illustrates exactly how the chain automatically unhooks from stakes and takes correct position on tire preparatory to being attached, after pulling car out of mud hole.

Showing "Pull-Out" Working.

EXPANDING REAMER

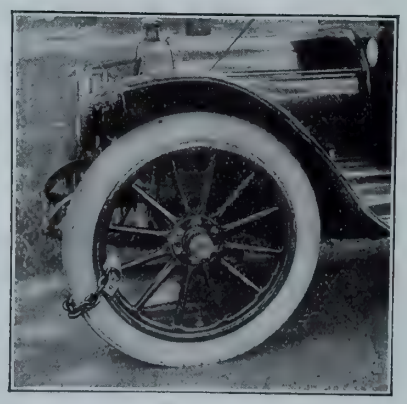
THE new Wetmore Expanding Reamer is a commercial development of a type of adjustable reamer which the Wetmore Reamer Company of Milwaukee supplied to the shell manufacturers of this country and Canada, and which performed so successfully in that strenuous service for three years. Such concerns as Leaside Munitions, Ltd., Canada, and Steel & Radiation, Ltd., Canada, used the shell type Wetmore Expanding Reamer during the war. As will be noted by referring to the accompanying illustration one outstanding feature of the type of reamer now being marketed is the left hand spiral cutting angle of the blades. By means of a wrench provided, a graduated screw collar, which is counterbored in the front end of the reamer body, may be manipulated to adjust the reamer to suit limit gauge. Each graduation of the screw collar indicates one thousandth part of an inch in diameter. No shims, screw drivers, callipers or other tools are needed in making the adjustments. The body is solid and attachment may be made to any arbor, although arbors are usually furnished—straight arbors for lathe reaming in machine shops; Morse taper arbors for drill press reaming; and floating arbors, usually for turret lathe reaming. Blades are put up in sets of four or six, depending on the size of reamer, in labeled cartons so as to be easily stored and identified. The standard size reamers are now made in diameter from 1 inch to 4½ inches, four blades being used on all sizes up to 3 inches and six blades on the larger sizes.



Wetmore Expanding Reamer.

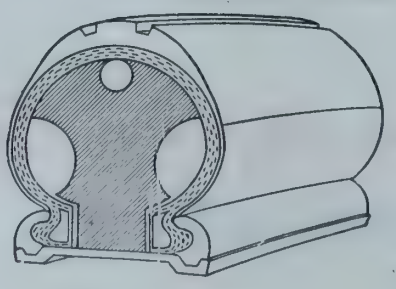
Woodworth Radiator Cement

Woodworth Auto Lock



Woodworth Lock, fixed to car wheel.

Hart's Ford Locking Device.



Triple Airless Tire

RADIATOR CEMENT

WOODWORTH Manufacturing Corporation, Niagara Falls, Ont., is placing on the market a radiator cement. It sells for fifty cents.

AUTO LOCK

THE Woodworth Auto Lock consists of a heavy steel chain having links 2 inches wide made of ½ inch steel with a high-grade Yale Tumbler Lock for locking the ends together around the tire and rim. The chain is covered with leather where it comes in contact with the paint. It is recommended that the chain be used on the right front wheel. This lock does not prevent the car from being moved in any case of fire as is required by the City Ordinances, but effectually prevents stealing. It is made by the Woodworth Manufacturing Corporation, Niagara Falls, Ont.

LOCKING DEVICE

THIS illustration shows Hart's Ford Locking Device installed on the gas and spark levers, locking them in a retarded position. The device is made of heavy, cold, rolled steel and is so adjusted to the steering column that its removal by a thief by means of cutting, sawing or filing, is not possible because the length of time required to do so would cause detection. The makers claim that not a single instance has been reported of a car secured by Hart's Ford Locking Device being stolen. The strongest feature of this device is its simplicity. It consists of but one piece of steel and is practically indestructible. There is no mechanism to get out of order. A child can understand its application. These locking devices are heavily nickel-plated and are packed in attractive boxes (containing twenty-four devices in separate cartons) for counter display. Padlocks are supplied by Hart and Company when desired, at a price which depends upon the style of lock required, but as dealers generally prefer to supply a lock that meets with their special approval, this matter is left discretionally with them. The manufacturers are Hart and Company, 3 Appleton Street, Boston, Mass.

TRIPLE AIRLESS TIRES

THIS airless tire is claimed to be puncture and blow-out proof. It consists of a tread and casing in which is incorporated a bridge-piece of special form, designed to provide chambers which combine to render the unit resilient and to assist it in absorbing road shocks, etc. It is made with clincher, straightside and universal beads which are locked in position on the rim by the interposition of the bridge-piece. When this tire is put on the rim, there is said to be no resultant friction. Three times normal mileage is claimed. The manufacturers are: Triple Airless Tire Co., Manorville, Pa.

C. G. E.
Automobile Accessories
"Tested for Service"

Quality is defined in the dictionary as "that which makes a thing what it is." That—quality—which has made C.G.E. Automobile Accessories what they are — is perfection. Moreover, the quality is consistent to-day — to-morrow — or next year.

K. W. TRACTOR LIGHTING OUTFIT

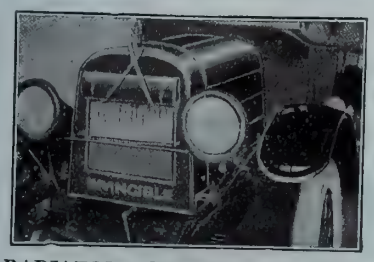
Each outfit consists of Generator, wire, switch, bulbs, trouble lamp, and two head lights; one for steering and one for the plows. If desired, we will furnish a foot pedal instead of a switch, it can then be arranged to take the friction wheel off the fly wheel in the day time when not in use.

WEED ANTI-SKID CHAINS

On heavy roads, in wet weather or for snow and ice nothing will safeguard an automobile like a set of Weed Chains. It is practically impossible to avoid skidding without them, no matter how careful you may be. The cross chains are made of special diamond hard stock and the links are smoothly welded and heavily brass-plated.

C. G. E. AUTO HEATERS

These Heaters afford an inexpensive, safe and convenient method of keeping the radiator and engine warm during the night, while the car is in the garage. All that is necessary is to lift the hood of the engine and place heater inside near the radiator. Replace hood, turn on the current and throw a blanket over the hood.



RADIATOR AND HOOD COVERS

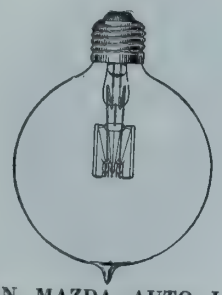
These covers are made in the combination rolling and split door type. They are well made from selected material and warranted to stand severe usage. When ordering state year and model of car.

ATWATER-KENT IGNITION

The type K-3 is a simple foolproof Ignition System that requires no skilled maintenance in the field, no expert needed to repair it. Furnishes a big hot dynamic spark required by tractor motors at all speeds from cranking to maximum.

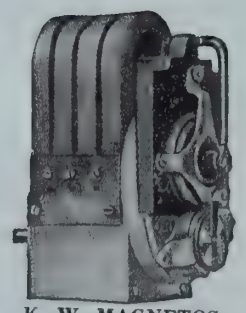
BOYCE MOTO-METER

A scientifically made Motor heat-gauge attached to the radiator cap of automobiles, trucks or tractors. It accurately registers condition gas engine is operating in, thus warning you of over-heating there by preventing damage.



EDISON MAZDA AUTO LAMPS

Eliminate trouble by installing the famous Edison Mazda Auto Lamps. Made expressly to withstand the heavy usage that automobile lamps are subjected to. Made to fit and give satisfaction in every make of car.



K. W. MAGNETOS

The K. W. Magnetos can be used as a source of supply for your ignition system and tractor lighting outfits. It is simplicity itself. Strong and well made, it has no delicate electrical instruments to get out of order.

C. G. E. Automobile Accessories are for sale by dealers everywhere

Canadian General Electric Company, Limited

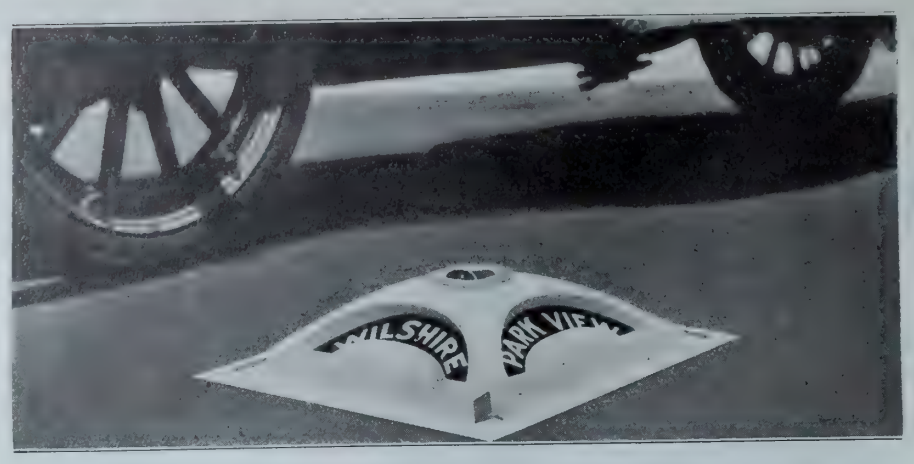
Head Office - TORONTO

Branch Offices: Montreal, Quebec, Halifax, Sydney, St. John, Ottawa, Hamilton, London, Windsor, Cobalt, South Porcupine, Winnipeg, Calgary, Edmonton, Nelson, Vancouver and Victoria

Manufacturers and jobbers of electrical goods for every purpose. Wholesale only. Dealers everywhere sell C.G.E. products.

STREET INDICATOR

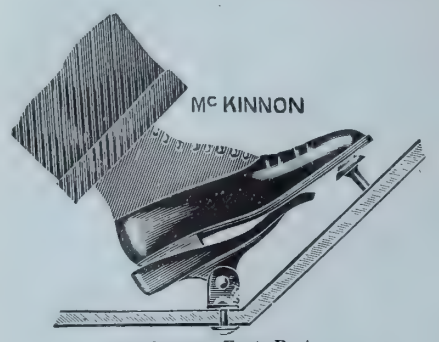
A NEW street indicator with several novel points is the Friel street indicator, manufactured by the California Corrugated Culvert Co., West Berkeley, California. The "button" attracts the attention of motorists and commands the respect necessary to the enforcement of traffic regulations at street intersections. For the full 24 hours of each day, the red indicators with names of streets not only attract attention and prevent "cutting corners," but guide motors and pedestrians as well. The frame is of heavy cast iron, with insets for heavy plate glass in which names of streets are lettered. This frame is bolted to a concrete block into which a conduit is fitted for wiring. Provision can be made in new work for conduit and frame, making unnecessary the concrete block. A 110 volt lamp is supplied unless otherwise specified.



Friel Street Indicator—names are in red.

FOOT REST

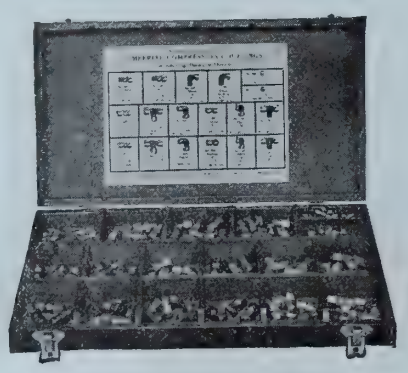
THIS accelerator foot rest is made of the best malleable iron. It is claimed that with this device, the driver can always maintain absolute control of the accelerator button with one foot, on all kinds of roads. It has black enamel finish, and can be fitted to any car in five minutes. Manufacturers: McKinnon Industries, St. Catharines, Ontario.



Accelerator Foot Rest.

J. C. M. RADIUS ROD

The J. C. M. radius rod, manufactured by the Jersey City Machine Co., Jersey City, N. J., is made with no brazed or welded connections. It is claimed that this new device makes for added safety and convenience in driving a Ford. The stud or axle ends are attached to the tube arms by a patented process which obviates against all possibility of breakage at these points. The head ends are securely clamped in the patented socket. The makers claim that any tendency toward swaying or oscillation in a cor is eliminated by the J. C. M.



No. 110-F Compression Coupling Assortment.

SUESS RIB LENS

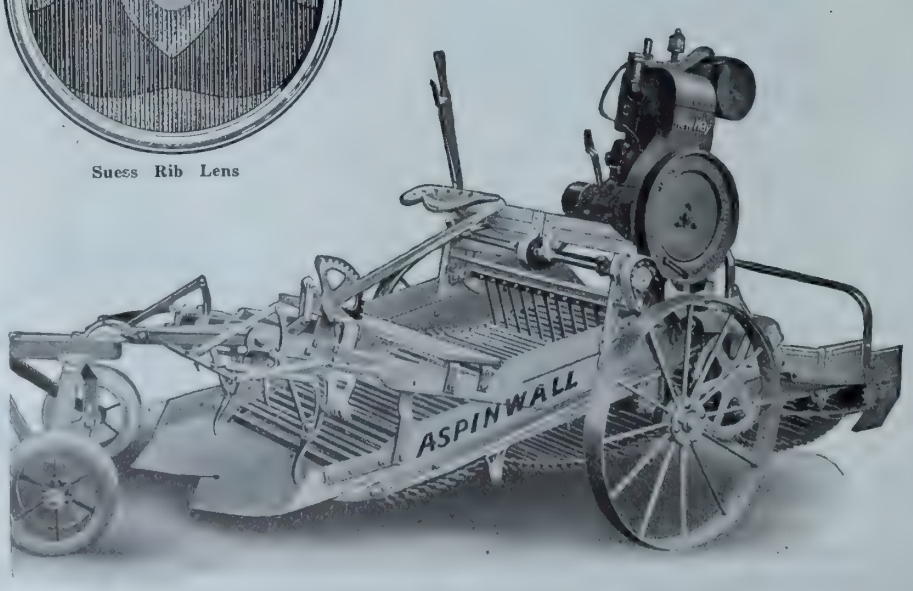
THIS is a headlight lens for dimming, diffusing and deflecting the rays so that the road is lighted for a distance of 500 ft. from the car with the strongest light for the first 200 ft. Side light is thrown for 20 ft. each side of the car, and all light is deflected below the driver's eye.

Manufacturers are: Suess Glass Co., Eighth and Virginia Streets, Seattle, Wash.

Suess Rib Lens

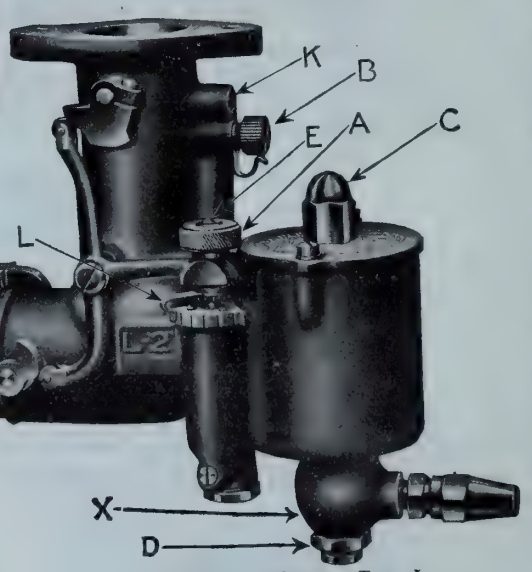
ASPINWALL STRAWBERRY DIGGER

THE latest product of the Aspinwall Canadian Co., Guelph, is the Aspinwall Strawberry Digger. The machine is said to revolutionize the work of handling plants in the field and to accomplish as much as forty men following the old method. The length of the digger is approximately twelve feet from point of plow to rear end with width forty-two inches. The chain conveyor is especially constructed of iron pipe and steel bars. The wheels are of steel thirty-six inches in diameter. The trucks are of special convey tread with fourteen-inch diameter. The length of separating surface afforded in this digger is approximately nine feet, with width of separating surface of forty-two inches. It is equipped with finger rack for turning plants on elevator chain. It is hinged at both ends and arranged with springs to give proper tension on the fingers. This machine, though large in size, is of remarkably light draft, due to the use of bronze bearings employed throughout and the aid of auxiliary motor power from a six-horse power engine mounted upon the machine. A running board is provided for the operator.



Aspinwall Strawberry Digger.

Dust-Proof Priming Cock.



Stromberg Carburetor Type L.

COMPRESSION COUPLINGS

THIS is a new assortment of Imperial Compression Couplings for garages and dealers with compartments and illustrated index making the fittings instantly available. It is a great convenience in filling orders. The selection as listed is claimed to be the *quickest* and *most effective* means of connecting up tubing for gasoline, oil and air lines on autos, trucks, tractors, motor boats, etc.

The manufacturers: The Imperial Brass Manufacturing Co., 1200 West Harrison St., Chicago.

PRIMING COCK

THE Dust-Proof Priming Cock is manufactured by the Roberts Brass Mfg. Co., Detroit, Mich. The priming cock is so attached to the handle that when the priming cock is not in use the top of the bowl is covered, thus preventing dust and grit from collecting in the bowl, so when gasoline is injected it enters the motor perfectly clean.

STROMBERG TYPE L

THE new Stromberg carburetor type L, made by the Stromberg Motor Devices Co., Chicago, has been brought out to meet the extreme conditions necessary for perfect carburetion of the present low-grade fuels. The carburetor has three adjustments, one for high speed, one for low or idling speeds and the third for intermediate economizer adjustment. This third adjustment is rather novel, for with it one can set the carburetor at the leanest possible mixture for any desired touring speed. If a long trip is going to be made over roads, the touring speed will be about 30 m.p.h., and with this adjustment the engine can be made to run most economically.

LIGHTING PLANT

A MODERN electric lighting and power plant for farms, rural schools and churches, suburban homes, stores, etc., is to be manufactured by one of the John N. Willys companies, the Electric Auto-Lite Corporation of Toledo, Ohio. The new system will be known as Willys Light. It will be marketed by the Willys Light Division of the Electric Auto-Light Corporation through distributors and dealers. The formation of the sales organization is now under way.

The new system is said to be the most complete that has yet been placed on the market. It is operated by a Willys-Knight sleeve-valve motor, a motor known for its simplicity of operation and its quietness. The engine has been developed to such an extent that it requires practically no attention and is said to be so simple that a child can operate it, according to those who have observed it.

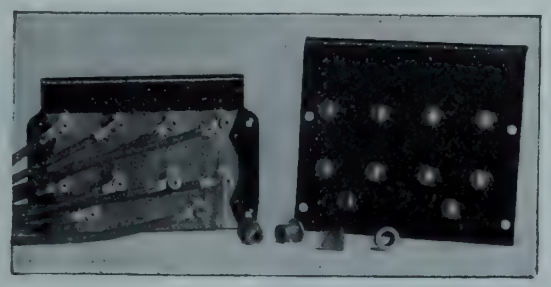
The complete plant consists of a Willys-Knight engine, a directly connected generator, a simple control box and a storage battery. The Knight engine burns kerosene at approximately one-half the cost of gasoline. It is air-cooled, self-cranking, self-running, and self-stopping. The control is semi-automatic.

Willys Light generator is shunt wound for 32 volts. It delivers 750 watts. The armature of the generator, the engine fly wheel and crank shaft are constructed in practically one piece, thus eliminating separate generator bearings and reducing friction. The battery consists of 16 cells with nine plates to the cell. These are enclosed in sealed glass jars. They have a capacity of 160 ampere hours.

Four Fast Sellers For Fords

"CASCO" Products Cover a Multitude of Trouble

"Casco" Coil Box Protector



The Only Protector for FORD CARS against Rain and Wet Weather

It is a common thing for Ford cars to stall in wet weather. The water works in under the hood and into the coil box causing short circuit. With the "Casco" Box Protector this trouble and worry is eliminated. It covers the Ingnition and Coil Box. Dryness is guaranteed.

"Casco" Fan Belt Guide

One-minute attachment. " Once on never off." One of four fast sellers for Fords.

MR. DEALER, a good demand and profit are sure to follow the handling of "Casco" Fast Sellers.

MAY WE HAVE A TRIAL ORDER?

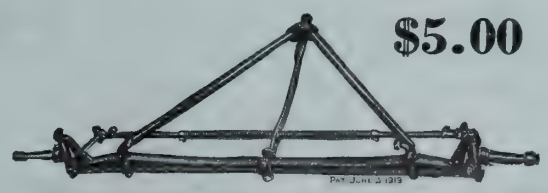
"Casco" Oil Drain Cock

Tells about the oil

No Loss No Leak No Worry

The "Casco" Oil Drain Cock is automatic in action. No cock wrench is needed. Every Ford owner needs one as it enables him to conveniently keep close tab on the oil level and prevent unnecessary wear of bearings.

$5.00



"Hold 'Em in the Road" for Ford Cars

Hold 'Em in the Road

Radius Rod Brace, Anti-Rattler, Axle Support and Safety Device All in One. There is no Accessory Manufactured for Ford Cars that carries as Strong Combination of Strength and Safety. FITS ALL MODEL FORDS TO 1919 INCLUSIVE.

Cooper Auto Supply Co., Thomasville Ga., U.S.A.

A. H. FRAZIER, 1150 Homer Street, Vancouver, B.C.

Lubricants of Quality

A LITTLE GOES A LONG WAY

HARRIS
TRADE MARK-REG. U.S. PAT. OFF.
OILS AND **GREASES**

AND EVERY DROP COUNTS

HARRIS TRACTOR CYLINDER OILS

MADE IN FOUR GRADES

HEAVY, EXTRA HEAVY, SPECIAL AND EXCELLO

from Premium Pennsylvania Crude by a careful process to meet the exacting conditions of the Tractor Motor---HARRIS OILS have a high fire test and are very viscous. One of the four grades above listed will properly lubricate any Tractor---HARRIS OILS have been on the market for over 35 years and have won the distinction of being

AMERICA'S LEADING LUBRICANTS

Write for Prices and Booklet

A. W. Harris Oil Co.
326-328 South Water St.
PROVIDENCE, R.I.

WE GIVE

"Quality and Service"

IN

TRACTOR and TRUCK STEEL CASTINGS

JOLIETTE STEEL CO., LIMITED
903 Read Building, Montreal
JOLIETTE, P.Q.

SEE OUR EXHIBIT
OF
SPEDOLENE PRODUCTS
AT
The Ottawa Tractor Fair
October 15th, 1919

Spedolene Tractor Transmission Lubricant
Spedol Tractor Oils, and Other Lubricants

AGENTS WANTED

For Tractor Oil Chart and Prices write to

The Spedolene Refining & Mfg. Co., Limited
27 Common Street MONTREAL, CANADA

Automotive Accessories and Implement Equipment

CELL TESTER

THE Shuro Cell Tester, manufactured by the H. B. Shontz Co., 157 West 54th St., New York, is of special construction and design, to meet the constant demand of the batteryman and the automobile owner. The simultaneous voltammeter is mounted in a position by which it can be easily read, and amply protected. The light above the voltammeter will readily convince the customer of the condition of the battery.

The simultaneous voltammeter has a double scale, the upper reading volts 0.2, the lower amperes 0-250 which gives

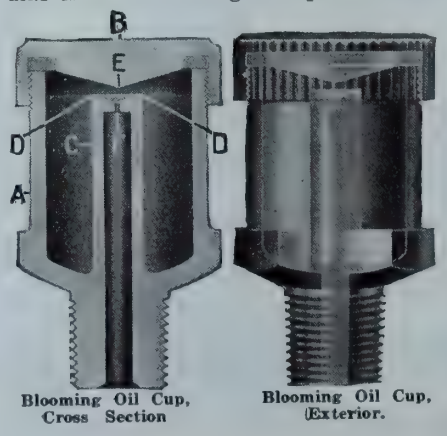
Shuro Cell Tester.

the reader the accurate voltage of each cell under a discharge test.

If an eleven plate or larger cell stands up to 1.55 volts and 180 amps. it is doing well, while 1.40 volts and 165 amps. is good performance for seven or nine plate cells; however, the voltage at which a battery stands is not vital, as all cells may be low and uneven and need only a recharge. Trouble is present when a cell stands .10 volts or more below the remaining cells which are strong and show no tendency to weaken while SHURO is connected.

THE BLOOMING CUP

AN interesting oil cup has just been placed upon the market by the Bloom Flusher Co. of Tiffin, Ohio, that differs radically from most cups now in use and has many interesting features. The Blooming Cup, as it is called, is designed to feed oil automatically at regular intervals in single drops. The inventor of this cup believes that by doing this he will be able to overcome most of the drawbacks that have prevented the general use of oil as a lubricant on automotive equipment.



Blooming Oil Cup, Cross Section **Blooming Oil Cup, Exterior.**

Unlike many devices that have been created for a similar purpose, this cup has no moving parts whatever, but consists only of the cup, an individual casting and the cap. It is made of brass nickelled and is a very substantial appearing and serviceable job if appearance may be taken as a criterion.

In tests extending over a period of a year it has been found that the peculiar design of this cup as illustrated above permits 2,000 miles of service on a single filling of the larger size cup which holds two drams and 1,000 miles with the smaller which is just half its size. The reason for this unusual mileage is the fact that only enough oil is fed to keep a film of oil about the wearing part, which is kept renewed by the occasional drop of fresh lubricant.

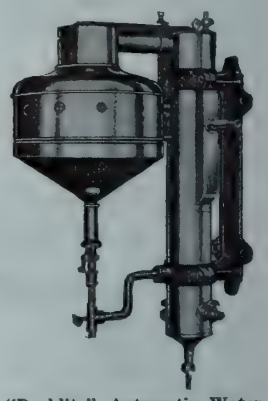
An old and well-known principle of physics is utilized in the design of this cup and this is largely responsible for its effectiveness. Capillary attraction or the tendency of fluids to follow an established path—to make a somewhat loose definition—and to continue to spread, keeps the oil feeding against the attraction of the vacuum formed with the closing of the cup when the cap is screwed down. The vibration of the vehicle also assists the action with the result that when the going is rough more oil is actually fed than when travelling over smooth roads where less is needed.

For use on shackles elbows are required which are furnished in 45 and 90° angles.

Charles S. Monson, 2113 Dime Bank Building, Detroit, is exclusive sales representative, and will supply illustrated literature on request.

FOR DISTILLED WATER

THE "Rochlitz" Automatic Water Still, manufactured by the W. M. Lalor Co., 431 South Dearborn St., Chicago, is designed for battery efficiency. With this, distilled water for batteries can be readily prepared. The



"Rochlitz" Automatic Water Still

still may be operated by gas, gasoline, kerosene, steam or electricity. The cut shows the gas-operated type.

TRACTION RING

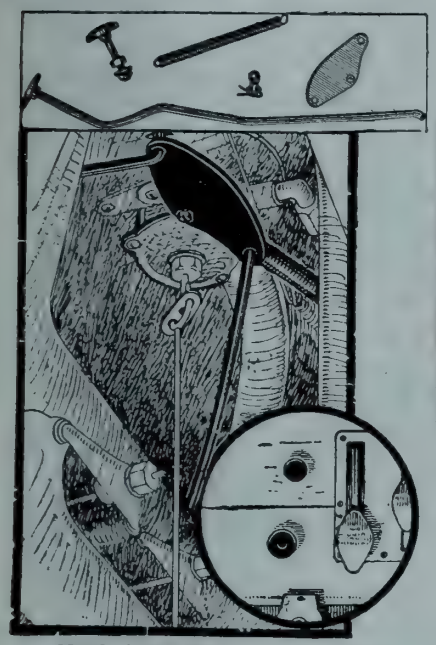
THE "American" traction ring made by the *American Traction Ring Co., Inc., White Plains, N. Y.*, is intended to solve the difficulty of being unable to pull out of a bad spot. The ring itself is fastened to the outside of each of the driving wheels and to this ring are attached eight blades, or paddles, set at an angle of 15 degrees so that they may exert the proper pressure as they come into action below the horizontal hub line. These blades are also attached to an outside guard ring, the complete device being attached to the wheel by means of bolts fastened to a ring, which

is securely placed on the inside of the wheel for that purpose.

The rings are constructed in such a way as to make them stand up under the hardest kind of usage, and the blades are so set out from the tires as to make it possible to use chains without disturbing the blades. Moreover, there is no chance of the blades getting stuck on curbs or other hard obstacles. nor do they come in contact with hard road surfaces. They are made in all sizes for trucks and passenger cars. They are shipped complete with every part ready for use and are attached to the wheel with little trouble.

FORD FOOT FEED

THIS is a new foot feed for Fords, claimed to be particularly simple and practical. It is made with but two moving parts, and goes direct to butterfly valve of carburetor. It can be put



Metal Auto Parts Co.—Ford Foot Feed.

on in 15 minutes and does not interfere with removal of floor boards or operation of hand throttle. Manufacturers: Metal Auto Parts Co., 624 Michigan Ave., Chicago, Ill.

STOCK ROOM SYSTEM

THE Ford parts stock system as designed by H. A. Steere of the Steere-Kitson Company, Detroit, offers a timely solution to many vital every-day garage problems and should be of not a little interest to Ford dealers throughout the entire country.

The system is built up in a series of standard size units, the number of units depending upon the number of Ford parts carried in stock. In turn each bin in these units is proportioned to the size of the part contained in the bin and the volume of that particular part carried in stock on the basis of monthly demand. Then the bins are arranged in numerical order, following the Ford parts and accessory list, with a bin provided for each part regardless of its bulk.

The system is primarily a time-saving proposition for Ford dealers, in speeding up work on the floor and handing out parts over the counter as well as in ordering from the factory and taking parts inventory.

The units themselves make a very attractive appearance in the stock room, giving it an efficient, business-like atmosphere. Negotiations are now under way to have this system sold in Canada.

Unit stock Room system for the Ford dealer.

DISCING WITH FORD

THE Geneva Tractor "Adapts," Geneva, Ohio, shown in the M. T. I. New Equipment Section, in August, is

Geneva Adapter Tractor discing with a Ford.

here shown engaged in a new way—discing with a Ford.

CHANGING HAND MACHINE

Q. What is necessary to convert a hand machine into an electrically-driven installation when the user puts in a farm lighting system or connects with an electric power line?

A. First it is necessary to have accurate information as follows in ordering the motor outfit:

(1) Whether current is direct or alternating.

(2) The voltage if direct.

(3) Number of cycles, phases, and voltage if alternating.

The attachment comes complete ready for installation and consists of motor; wire and connection; long drip shelf (for motor base); pinion shaft and bushings; and necessary pulleys and belt.

Ten Forceful Sales Points

relating to the famous

"RAPID-EASY" GRINDERS

MOST WORK	MODERATE PRICE
BEST QUALITY	LOW OPERATING COST
LEAST POWER	SIMPLICITY
DURABILITY	SAFETY
EFFICIENCY	PLATES UNEQUALLED

Grinders are being sold every day in all parts of the Dominion. A reasonable effort on your part to sell the "Rapid-Easy" will prove profitable for both you and your customers.

Write us to-day. Let us put you in position to secure the lion's share of the trade in your district.

J. FLEURY'S SONS - AURORA, ONT.

Get This, It's a good one

The "Perfecto" Radiator

BUILT ON SCIENTIFIC PRINCIPLES

Will Not Burst When Frozen

For Ford Cars $50.00

Estimates on all other makes.

Ask Your Dealer

If it's Repairs, we have the most up-to-date Radiator Repair Dept. in Western Canada.

Guarantee Sheet Metal & Roofing Company

490 Portage Ave., Winnipeg

To Subscribe for This Paper

simply fill in this coupon, pin $1.00 to it, and mail it in.

"It gives you hard, cold, liftable plans to make and save more money."

The MacLean Publishing Co.
Toronto, Ontario

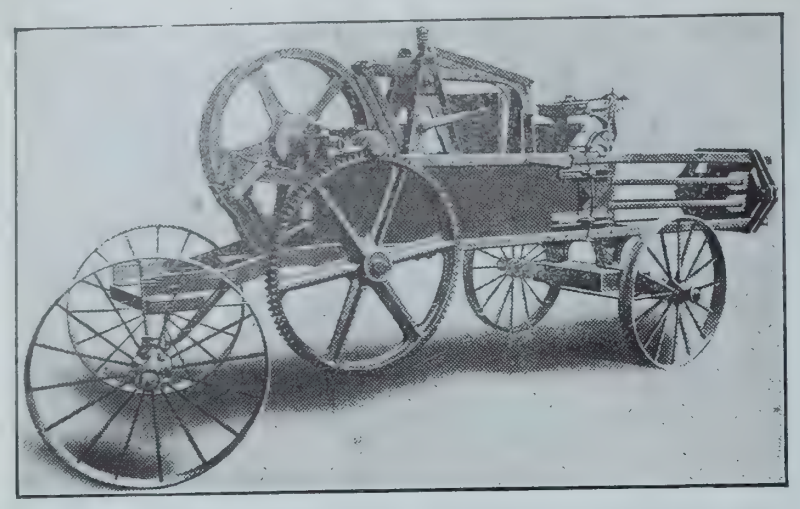
Please send me MOTOR, TRACTOR & IMPLEMENT for one year. Here's $1 to pay for it.

Name.....

Occupation.....

Address.....

A—MTI



The "Champion" Noiseless Belt Power Self Feed Hay Press with Friction Clutch Pulley and Block Dropper.

A Good Year to Sell Hay Presses

The splendid hay crop is bound to create a bigger demand for presses.

"DORÉ" HAY PRESSES

Pay a Good Commission

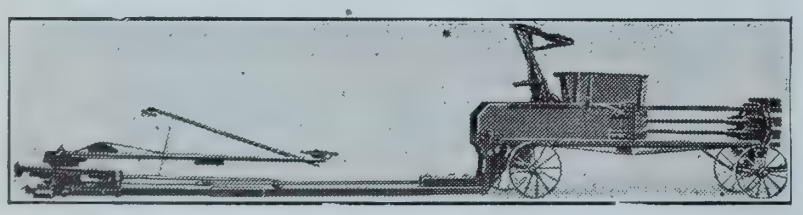
and they ensure long service, reliability and satisfaction to your customers.

The "Doré" is backed by a splendid record of performances, a record that we are proud of and which we will maintain at any cost.

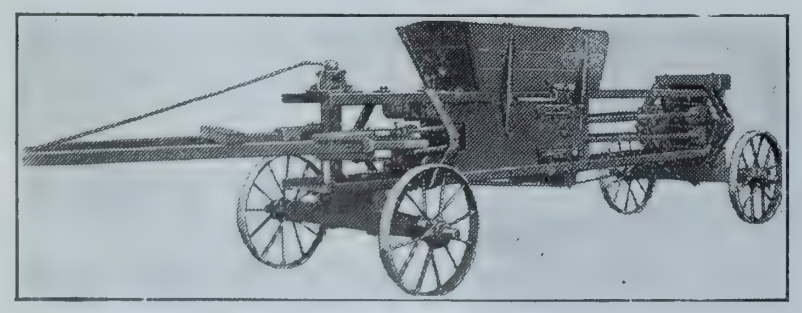
The **"Champion"** is built for engines and tractors. It is the most simple, lightest, strongest and most durable press on the market.

The **"Canadian"** is the leader of baling presses when it comes to power and rapidity. The plunger makes **two strokes for each circle of the horses.**

The **"La Condor"** noted for its simplicity and power. Only two working parts form its mechanism beside the plunger, arm and sweep.



The "Canadian" Improved Two-horse Full Circle Self Feed Steel Hay Press



"La Condor" Two Horse Half Sweep Power Steel Hay Press

"Doré" Threshers, Road-making Machinery, Cordwood Saws and Drag Saws are other "Doré" quality lines that pay a handsome commission. It will pay you to write for full particulars and prices.

J. B. Doré & Son, Laprairie, Que.

Jitney Tractor Will Have Its Day in Canada, too

TRAVELLING through certain parts of Illinois at night you may be astonished to see searchlights moving restlessly over the fields like giant fireflies, playing their long, white beams over furrows and between corn rows.

These are not flivvers gone astray; they are tractors, ploughing ground or cultivating corn by their own lights. For the farm tractor, during the past few years, has multiplied, especially in the Middle West. In fact the rise of the tractor is one of the most striking and significant things in present farming. The tractor got a late start. It is now in that stage of rapid growth and improvement which the automobile had reached about 1910.

During last year alone the number of tractors in use more than doubled. Of course, this was partly due to the war. Farmers were making money and labor was scarce.

You would probably be surprised to learn that the number of tractors now in use is only 180,000. In a land of 6,000,000 farms this is certainly not many. But the improvement has just started. The manufacturers of tractors have estimated their production for 1919 at 314,936. In other words, they expect to again more than double in a single year the number of tractors in use. Whether they will do it remains to be seen. They are holding out for war-time prices, and some of them are even boosting prices a little, while all of them are loudly predicting that tractor prices will stay up for a long time. But some observers in the employ of the Government say that with the price of steel lowered, tractor prices will have to come down by 1920 and will probably be down by next fall.

BE that as it may, the significant thing is that the application of the gasoline motor to farming is plainly on the eve of great expansion and development. All sorts of changes are predicted as a result. The horseless farm is in prospect and there are horseless farms already in California. Also the hired-manless farm is coming. One energetic man can to-day, with the aid of a tractor, cultivate far more acres than ever the man could cultivate before, and there is no telling how much he may be able to do in the near future, and he applies internal combustion more and more to his purpose.

The rise of the tractor began about ten years ago, when there appeared on the market several makes of large plowing tractors. These machines cost several thousand dollars, carried eight or ten plows, and developed about forty horse power at the draw-bar, which means about eighty horse power in the engine. They attracted a lot of attention; pictures of them were published in all the magazines; they were the greatest mechanical marvel.

But as farming machinery they were a failure in most places. They survive only on a few enormous wheat farms of the West. They are too expensive to own and to operate for the vast majority of American farmers. Those who bought them in the heyday of their popularity abandoned them for the most part within a few years.

Yet the giant tractor, according to Government observers, accomplished one thing for which it has never been given credit. It came into use just about the time the first of the wild prairie lands were being put under the plow. In Western Kansas and Western Nebraska and in the Dakotas, the last big patches of buffalo grass and greasewood were being conquered. And the giant tractor helped to conquer them. Land so dry and hard that horse-drawn plows could scarcely have scratched it, yielded to the great engines, with their long rows of plow shares, as easily as a fallow cornfield. The men that did the work often went broke in doing it. Many of the great tractors that conquered the last of the wild prairie lands were left to rust on the fields they had won, because their owners could not afford to operate them. But such is often the fate of pioneers after their work is done. And since the prairie soil had been broken by the big engines, its cultivation was easy.

FINDING that the big tractor could not hold a permanent market, the manufacturers went to the other extreme and put out a little two-plow tractor that delivered only about eight horse power to the drawbar. This type of machine, somewhat modified and improved, still holds the field, and is the one that promises to play such a large part in the future of American farming. In power it varies from eight to fifteen horse power at the drawbar, and in price from $1,000 to $2,000.

That price is bound to come down. It is probable that a workable tractor will soon cost no more than a good team of mules cost a few years ago. The "jitney tractor" is the dream of the manufacturer. Indeed one of the greatest motor-makers in America has been devoting much of his time for years to the effort to make a cheap but practicable tractor. Before the war he succeeded in putting one out at $750, but the price soon went up to $900. However, the $500 tractor may now confidently be expected. Tractors costing but a little more than this are already to be had.

The usefulness of the tractor is denied by no one. It is only the poverty of the average American farmer, and the generally decrepit state of farming in this country, which prevents a wider use of the gas engine in agriculture. Eighty-five per cent. of the farmers who have used tractors have found them satisfactory, according to an investigation made by the Department of Agriculture.

The gas engine has not, however, succeeded in displacing the horse, except, possibly, on a few California farms. There is always something for the horse to do—a field to be plowed where the tractor cannot be used, or some hauling that cannot be done by motor truck, or corn to be cultivated. The result is that on nearly every farm where there is a tractor, there is also at least one team of horses. A farmer in Illinois who has a tractor for plowing, a motor cultivator for cultivating corn, and a motor truck for hauling, still kept three horses. He admitted they did not work very hard, but said that there were emergencies when a horse was indispensable. And Illinois is the very home of the tractor. In some rugged sections the tractor cannot be used at all.

THE motor plow will doubtless become more versatile in the next few years, too. Already, in addition to plowing, it does a variety of "belt work," which includes sawing wood, threshing grain, filling silos, baling hay and grinding feed. But with all of these accomplishments, the tractor lies idle a good part of the time, and this idleness is a loss to the farmer.

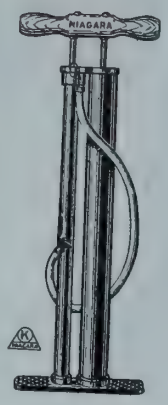
The tractor is undoubtedly reducing the amount of labor needed on farms. A good many Middle Western farmers who used to require two hired men, now get along with one and a tractor. This is considered economically sound and desirable, for it means that more acres can be cultivated and that better wages can be paid.

Ma Ought to Know.—Micky came home from school sniffling. "You've been licked," said his mother. "I ain't," said Micky. "There was a doctor at school this mornin' examined us, and he said I had ad'noids." "Phat's them?" asked his mother. "They're things in your head as has to be taken out," answered Micky. "It's a dom lie," angrily exploded mother. "I've fine-combed yure head ivry Saturday night and niver on ad-noid did I find!"

"NIAGARA" ACCESSORIES

"Niagara" Jacks
Six good models

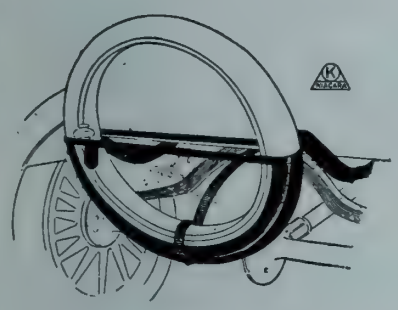
"Niagara" Pumps
Efficient and durable
Chrome leathers used throughout



"Niagara" Bumpers
Every Niagara Bumper is built with shock-absorbing springs

"Niagara" Tire Carriers
The Best Yet!

"Lyon" Resilient Bumpers
Save the car without spoiling the bar



For Satisfaction
Specify "Niagara" Brand to your jobber; or write direct to the manufacturers.

Kinzinger, Bruce & Co., Limited
Niagara Falls Canada

Hundreds of repeat orders from dealers all over Canada show conclusively that

GASTINE
HAS MADE GOOD

Those mild looking tablets were at first used in the gasoline of only a few motors, belonging to men who either did not know that there had been other apparently similar products which did not live up to their promises, or else by those who were so appalled by gasoline costs that they were willing to take a chance.

This was sometime ago, but to-day we see over 25,000 motorists in Canada using the harmless, efficient little GASTINE Tablets, and assuring themselves again and again that GASTINE does live up to every claim made for it by the manufacturers in effecting a 30% SAVING IN GASOLINE COSTS at the same time giving more power and climbing ability, and minimizing carbon with no harmful effects whatever upon any part of the engine.

Gastine is equally effective with tractors, stationary engines, motorcycles and motor boats.

ALL DEALERS should be benefiting from the advent of this honest gasoline economizer, produced by fair dealing people and backed by a money-back guarantee.

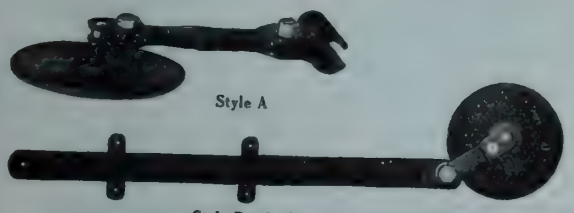
GASTINE retails at $1.25 per box of 100 tablets. Special terms to dealers. If you would like to obtain an exclusive agency for your district, write us now—to-morrow may be too late.

ROBERTSON & MURPHY LIMITED
Sole Canadian Distributors
CORISTINE BUILDING, MONTREAL

Hindview AUTO MIRRORS

C Bracket for Closed Bodies

Style A---Long


Style D---for Motor Trucks

Style F for Front Fenders

The "Hindview" Auto Mirror prevents accidents by enabling the driver to keep an eye on the rear traffic without losing sight of the road ahead. Our Ball Joint allows immediate adjustment to any desired angle without the use of any tool.

Substantially made — nicely finished — has five inch plain, or lens, plate glass mirror. The lens mirror increases the field of vision about 50 per cent. without distorting the view. Note large, firm clamp for attaching to windshield.

Write for our folder showing complete line

Agents, Jobbers, Write for our Proposition

Superior Quality **KALES STAMPINGS** *Prompt Deliveries*

PRESSED METAL PARTS, LIGHT AND MEDIUM WEIGHT STAMPINGS

Our complete plant, superior equipment and efficient organization are at your service. You will insure satisfactory results by letting us make your stampings. Motor, axle, transmission and clutch stampings. Write to-day enclosing blue prints or samples for estimates and our catalog.

KALES STAMPING COMPANY
446 West Lafayette Blvd. Detroit, Michigan

Big Demand Assures Quick Turnover

Nearly every progressive farmer who is not already a possessor is a likely purchaser of a Feed Cutter and Silo Filler. Now is the time for dealers to stock up with an exceptionally good line to meet the increasing demand.

Peter Hamilton
Feed Cutters and Silo Fillers

embody all the latest improvements and are right up-to-date in every respect. Danger of breakage at high speed is eliminated, and our feed cutters can handle the largest quantities of corn in shortest time and with the least power.

Our Ensilage Cutter and Blower (illustrated) will easily handle 8 to 10 tons of corn per hour. Frame is of selected Canadian hard maple. Has steel knife and blower wheel which cannot break or blow to pieces from excessive speed or by the entrance of a stone or other foreign substance. This is a very important feature and a good selling point.

Peter Hamilton Machinery has won a reputation for itself among farmers, so selling it will be an easy matter.

Write us for particulars.

The Peter Hamilton Co., Limited
Peterborough Ontario

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

IS

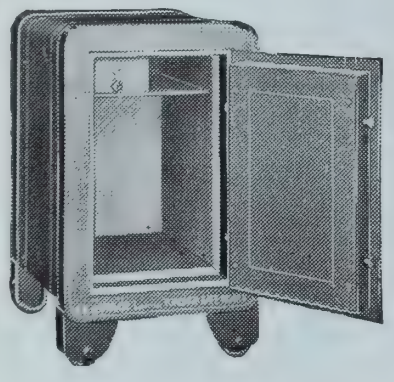
A CANADIAN COMPANY offering service of interest to and in the interest of Canadians.

Time payments made possible and profitable for Manufacturer, Dealer and Customer. Of particular interest to Automobile and Musical Instrument Trades.

LET US KNOW YOUR REQUIREMENTS

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

Bank of Hamilton Building, Toronto, Ontario
McArthur Building, Winnipeg, Man.



Protection for Your Victory Bonds, Sales Notes, etc.

The Farmer's Safe

With one of our specially constructed cabinets with combination lock, your money, valuable papers and documents are far safer than when locked in your desk or placed in a drawer.

Every farmer needs one of these made-in-Canada cabinets. They afford you an assurance of safety from loss.

DEALERS—This is a splendid opportunity for implement dealers. Write for prices and full particulars at once.

J. & J. Taylor, Limited
TORONTO SAFE WORKS
Toronto, Canada

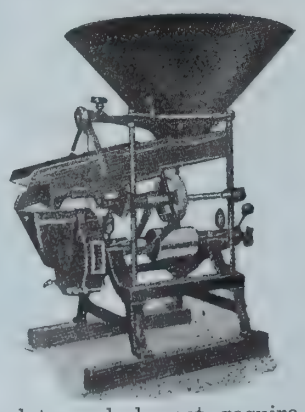
"Vessot" Grinding Plates

have remarkable wearing qualities

Superior in capacity and durability to any other plate on the market. Easily adjusted to grind coarse or fine.

"Vessot" Feed Grinders

have a reputation for Quality and Service that makes for EASY SALES AND SATISFACTION



"Vessot" Feed Grinders are easy to regulate and do not require an experienced miller to operate them.

They are heavy, compact and made to withstand the hard work they are required to do.

Made in nine sizes—6½", 8", 9", 9¼", 10½", 11" B Farm Type and 11", 13" and 15" Mill Type. A size for every requirement.

May we mail you our agency proposition?

S. VESSOT & CO. *Sole Manufacturers* **Joliette, Que.**

Sold exclusively in Canada by International Harvester Co. of Canada, Limited

Branches: Calgary, Edmonton, Lethbridge, North Battleford, Regina, Saskatoon, Yorkton, Brandon, Winnipeg, London, Hamilton, Ottawa, Montreal, Quebec, St. John

Write to the nearest International Harvester Branch for Free Booklet giving complete information

Trade Notes

NEW OVERLAND 4

INTEREST in the new Overland 4, the light car being produced at Toronto by Willys-Overland, Limited, centres in its spring suspension. A new principle altogether is involved, as radical as was the change in tires when pneumatic tubes were adopted. The idea of these "three-point" springs is to dissipate road shocks by distributing them throughout the spring suspension. In order to obtain this effect the middle points of the springs, front and back, project about 15 inches, giving a spring-base of 130 inches. With the wheelbase of 100 inches, the car has the advantages of quick turning, etc., but with the light car economy is combined with the riding effects associated with cars of longer wheelbase. Two years of all kinds of testing, including 250,000 miles of road tests, preceded the manufacture of the cars on a commercial basis. A million dollars has been spent on equipment at the Toronto factories, and the company commenced to swing into production on a quantity basis the beginning of October. The "4" sells at $1,195.

New Overland "4"

BT NEW CATALOGUE

Beatty Bros., Fergus, Ont., has published a new general catalogue, covering lines handled by both the hardware and implement trade. There are full page illustrations in colors, and an especially useful system of indexing.

W. J. ELLIS RETURNING

The many friends of W. J. Ellis, formerly general manager of the R. A. Lister & Co., (Canada), Limited., who went to England in the spring for reasons of health, will be glad to learn of his good progress towards recovery. In a letter to R. Howell, the present manager, Mr. Ellis expresses the intention of visiting Canada in the very near future and hopes to remain for a month or two.

In an interview recently accorded the *British Implement and Machinery Review*, Mr. Ellis refers to the "speeding-up" of British industries to take care of the tremendous demand for British-made goods from all over the world.

The R. A. Lister & Co. have orders at their factory at Dursley, England, for thousands of engines, of which a large number are going to Australia, New Zealand and South Africa. In these countries, as in Canada, there is a very strong demand for engines, milkers, cream separators, lighting plants, etc.

KING MADE IN DETROIT

In the September issue of M. T. I., in the New Equipment section, we ran a cut and brief description of the King Top. The address of the manufacturers was inadvertently omitted. This nobby-looking top, with the modish lines, is made by the King Top Co., Detroit, Michigan.

HAYES WITH POWRLOCK

James R. Hayes has joined the staff of the Powrlock Co., of Cleveland, O., in the capacity of assistant advertising manager. He has just been released from Government service.

OAK TIRE BOOKLET

A handsome, attractively-printed booklet, telling details of the various processes which take place in making their tires, has been issued by the Oak Tire and Rubber Co., Oakville. It is entitled: "Tougher than Oak."

The Beatty Bros., Ltd., salesmen met from all over Ontario, recently, at the head office, Fergus. While the men discussed business plans for the coming year, the wives were driven to places of interest around Fergus.

Northern Electric

POWER and LIGHT

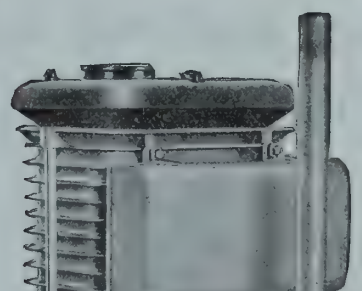
The complete line of Electric Farm Plants and Accessories.

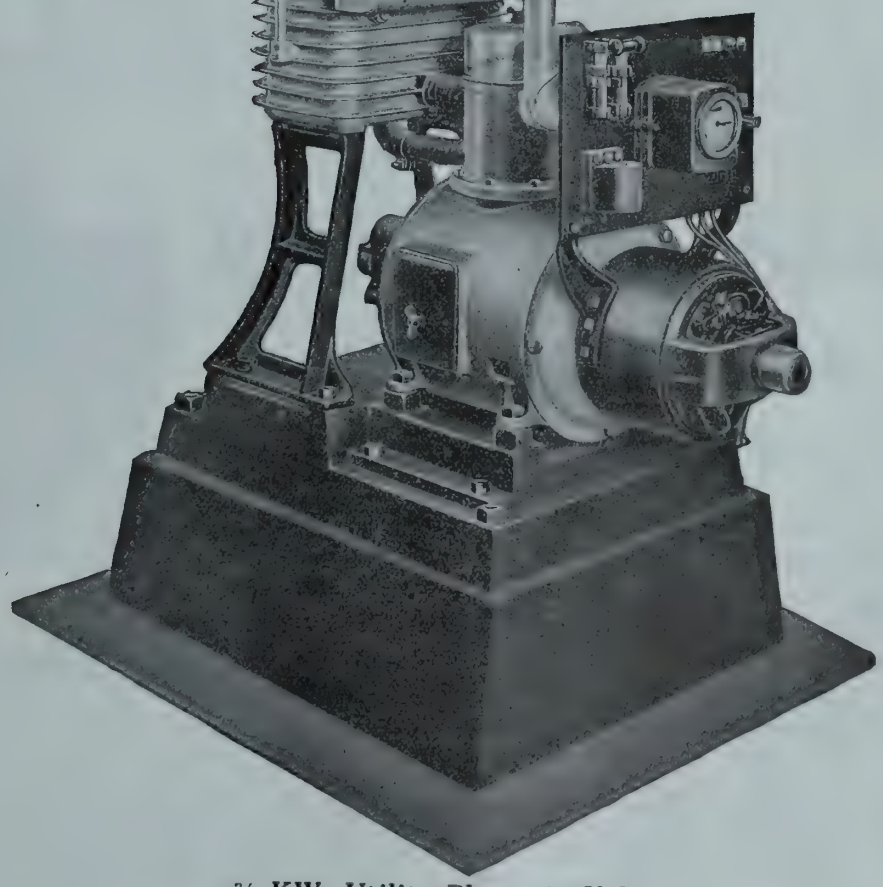
PLANTS---WATER SYSTEMS---MOTORS
HOUSEHOLD DEVICES---WIRES
AND SUPPLIES

Northern Electric Power and Light plants are backed by one of the largest electrical manufacturers and distributors in Canada. For more than twenty years we have specialized in electrical supplies FOR THE FARM.

Tank and Motor

Hundreds of farmers are now buying water systems. Are you selling them? At your service, the most complete line---any size. Automatic ---Air-pressure---open tank or hand controlled.





¾ KW—Utility Plant—32 Volt
The greatest value ever offered the Canadian Farm

DEALERS:

The Electric Farm Plant field is practically untouched. Your prospects are numbered by the thousands. You can get into this profitable business by writing our nearest house to-day.

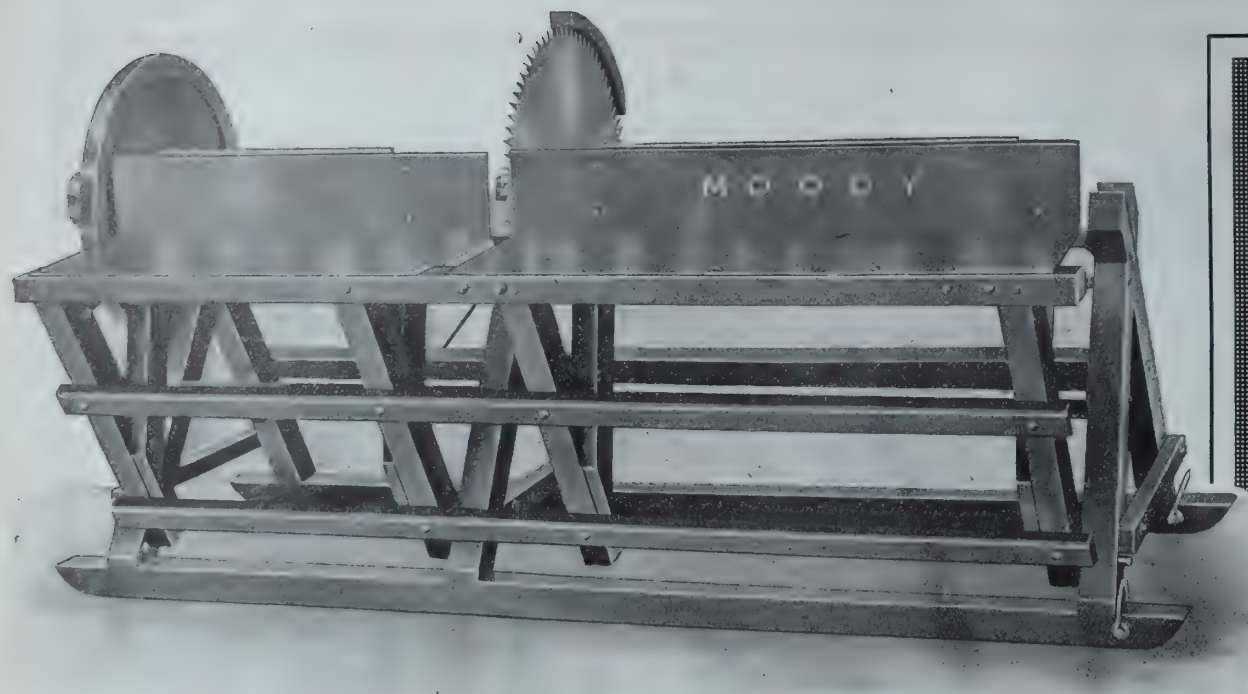
Northern Electric Company

LIMITED

Montreal
Halifax
Ottawa

Toronto
London
Winnipeg
Vancouver

Regina
Calgary
Edmonton

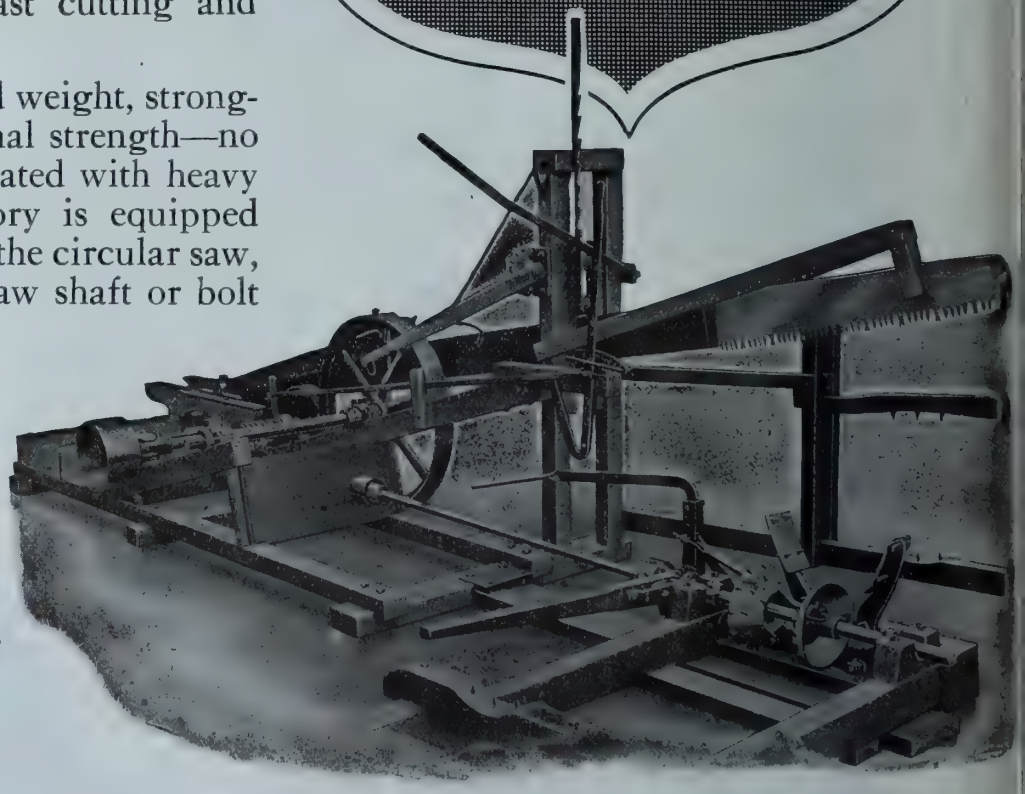


Matthew MOODY SAWS

Moody long swing table saw

A tool that's built for the utmost in safety, fast cutting and long service.

Carefully seasoned hardwood, of ample size and weight, strongly braced and bolted together, gives it exceptional strength—no gears, no complicated pieces. Log tables are plated with heavy steel plates and every saw that leaves our factory is equipped with a safety strap around the shaft close up to the circular saw, a precaution against accident in case box of saw shaft or bolt should break.



Speed plus Safety and long life

First Class Machines at Low Prices

Mr. Dealer, you'll find Matthew Moody saws well spoken of wherever they are known. Their construction embodies all the features that have been proven best by years of practical experience. You cannot recommend or sell a machine that will give your customers better satisfaction.

The Moody Drag Saw Machine

(Improved Design)

The popular Moody Drag Saw Machine has several new improvements that make it a better outfit than ever. By new special device the saw is put to rest and the self-feeding continues running. You can now move the log without a stop. Our pressure lever is also a distinct improvement. It can be used with convenience when required. Another feature is the log holder. It permits easy and convenient cutting of short cordwood without the slightest danger. A still hardwood connecting plank makes the whole outfit stable and rigid.

MATTHEW MOODY & SONS CO., *HEAD OFFICE* TERRE BONNE, QUE.

Represented in West by:

Messrs. Francoeur Bros., Camrose, Alta.

New Home Machinery Co., Saskatoon, Sask.

Mitchell's Hardware Co., Brandon, Man.

MADE IN CANADA

BUFFALO OILS

Quality Oils for Every Farm Purpose

You cannot get the best results in your machinery operations unless you use **quality** oils and greases. The quality of BUFFALO OILS has been thoroughly proven —they are Western Canada's favorite brand.

There's a Buffalo Oil or Grease to meet every requirement of the farm. Put them to the test.

BUFFALO OILS INCLUDE

Automobile Oil	Gasoline Burning Oils
Tractor Oil	Transmission Greases
Gas Engine Oil	Cup Grease
Steam Cylinder Oil	Crank Pin Grease
Machine Oil	Graphite Grease

PRAIRIE CITY OIL CO., LIMITED

Winnipeg Manitoba

DON'T sell him automobile plugs for his tractor motor. It's no longer necessary. Bethlehem engineers, working with prominent tractor engineers, have designed a line of *tractor* spark plugs to meet actual *tractor* requirements.

Write for samples and special terms to dealers. Don't sell tractor owners an automobile plug. It's no longer necessary—and it's poor business.

THE SILVEX CO.
BETHLEHEM PRODUCTS
E. H. Schwab, President
Bethlehem, Pa. U. S. A.

There is a Bethlehem plug for every type of motor

Bethlehem SPARK PLUGS

MAYBE ADAM LAUGHED AT THESE!

Ever Think of It?—Longfellow could take a worthless piece of paper and write a poem on it and make it worth $65,000.

That's Genius.

There are some men who can write a few words on a piece of paper and make it worth a million dollars.

That's Capital.

A mechanic can take material worth $5.00 and make it into watch springs worth one thousand dollars.

That's Skill.

There is a man in Paris who can take a fifty cent piece of canvas, paint a picture on it, and make it worth $1,000.

That's Art.

A merchant can take an article costing seventy-five cents and sell it for one dollar.

That's Business.

You can get a good sack of tobacco for 5 cents.

That's Bull.

The editor of *The Citizen* could write a check for $9,000,000, but it wouldn't be worth a d—— cent.

That's Tough.

We evolved this brilliant and altogether amusing article from our inmost consciousness.

That's a Lie—we copied it.—*The Tribune Citizen. (Sask.)*

* * *

For Sale.—One of our readers has an automobile for sale. The car is in good repair, that is, it has been repaired every day for two months. The engine will start with most anything but gasoline—a good way to get it going is to shove it.

It was to have been exhibited at this year's Exhibition, but they thought the farmers might take it for a Manure Spreader. It would be a handy car for anybody that did not want to go any place, but preferred to stay at home and overhaul it.—*Massey Harris Shop Bulletin.*

* * *

Don't Forget the Old Hen.—All motorists travelling west and passing through Goodeve's, millionaire rancher's, yard, had better carry a stray hen at the back of their car, so that, in case of running over an "old hen," they could immediately replace it and avoid the trouble of accepting a summons at Ituna.—*Melville Canadian.*

* * *

Life in the Old Girl Yet.—One morning an old man was busy in the backyard with a saw and hatchet, when the next-door neighbor came to inquire after the health of his wife. The wife, it seems, had taken a severe cold. "Good mornin', Mr. Smith," said the neighbor; "how is Mrs. Smith this mornin'?" "Just about the same," answered old Mr. Smith. "She didn't sleep very well last night." "Poor dear," said the neighbor sympathetically. "I s'pose that's her coughin', ain't it?" "No, it ain't her coffin," said Smith, keeping his eyes on his work; "it's a new henhouse."

* * *

Transcript.

Beating Him At His Own Game.—The oldest good story is the one about the boy who left the farm and got a job in the city. He wrote a letter to his brother, who elected to stick by the farm, telling of the joys of city life, in which he said:

"Thursday we auto'd out to the country club, where we golfed until dark. Then we motored to the beach and Fridayed there."

The brother on the farm wrote back:

"Yesterday we buggied to town and baseballed all afternoon. Then we went to Med's and pokered till morning. Today we muled out to the corn field and gee-hawed until sundown. Then we suppered, and then we piped for a while. After that we staircased up to our room and bedsteaded until the clock fived."—*Case Eagle.*

Best Track of Them All

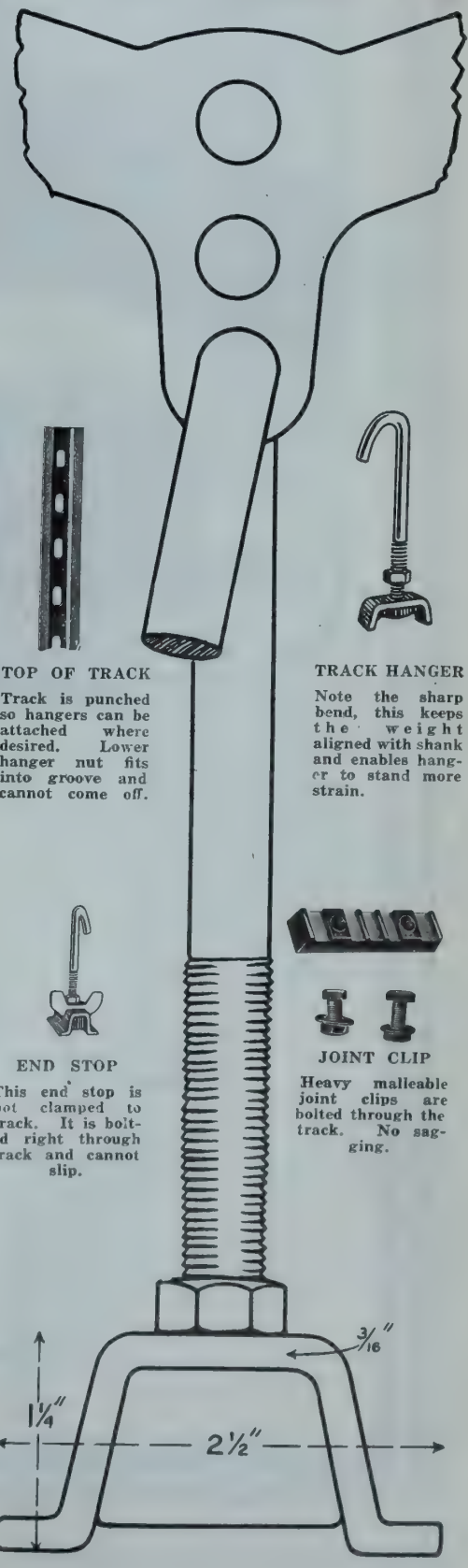
The BT Single Rail Steel Track is the heaviest hay track made. It weighs 2 2/3 lbs. per foot, which is half a pound more than other tracks. It will carry the heaviest load of the biggest sling car. We guarantee it to carry a ton with three-foot spans.

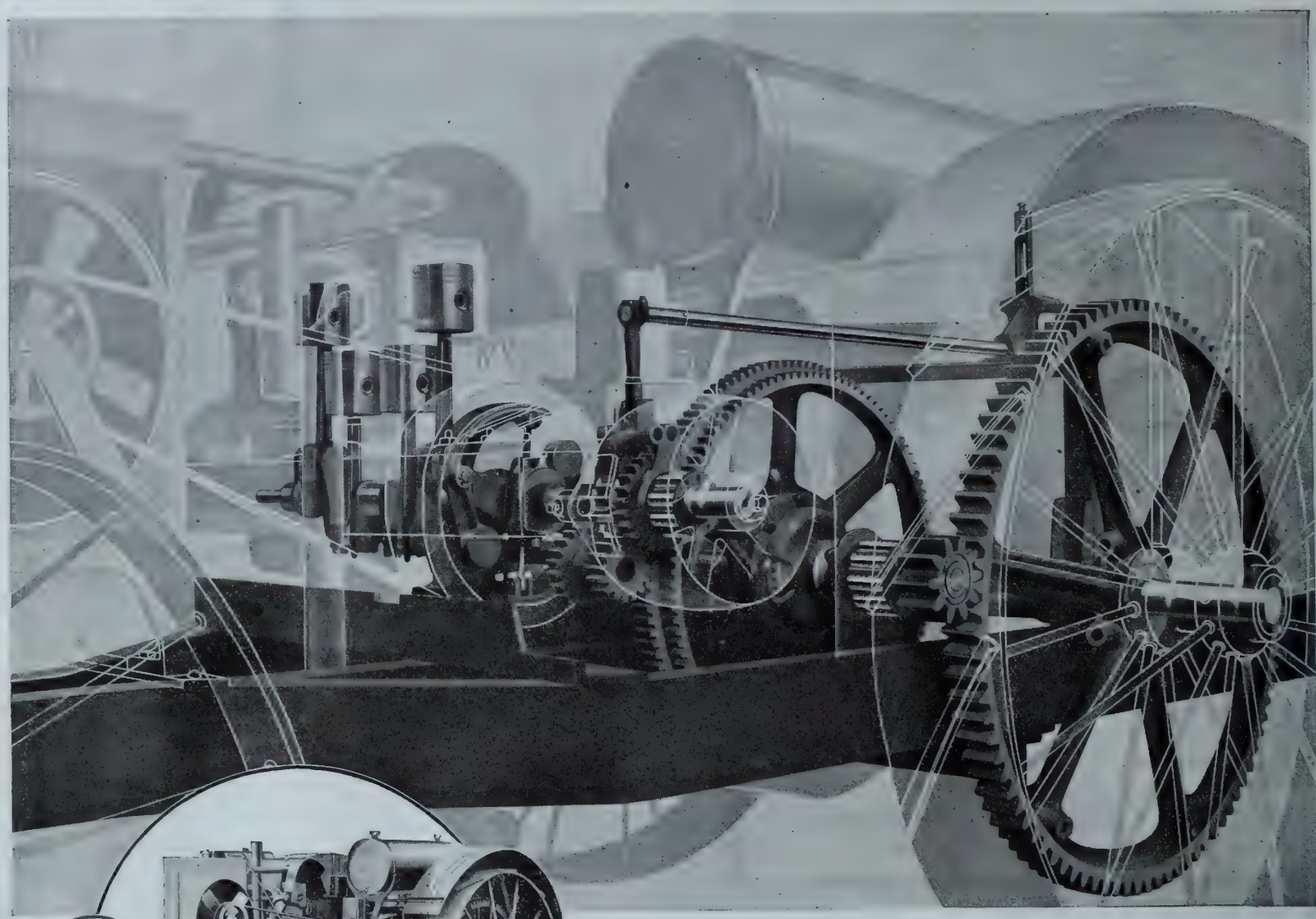
For other information about BT Hay Carriers, write to

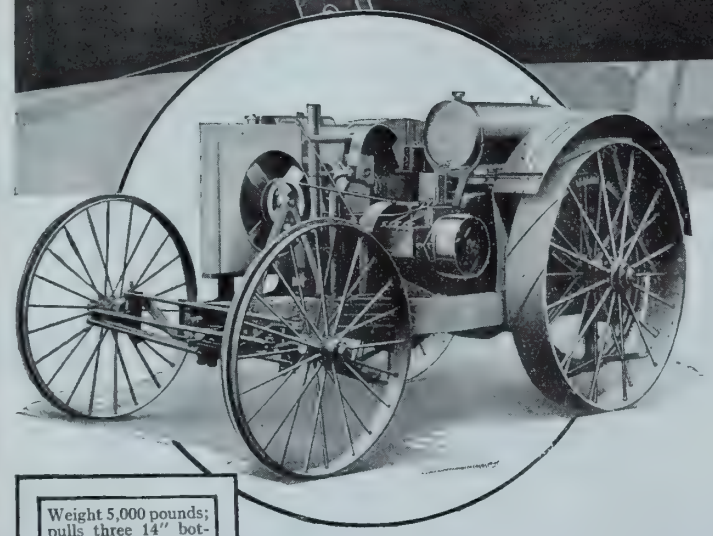
BEATTY BROS., Limited

Winnipeg, Man.; Fergus, Ont; Montreal, Que.; Edmonton, Alta.; London, Ont.; St. John, N.B.; London, England, 16 Holborn Viaduct.

BT HAY CARRIERS


TOP OF TRACK
Track is punched so hangers can be attached where desired. Lower hanger nut fits into groove and cannot come off.
TRACK HANGER
Note the sharp bend, this keeps the weight aligned with shank and enables hanger to stand more strain.
END STOP
This end stop is not clamped to track. It is bolted right through track and cannot slip.
JOINT CLIP
Heavy malleable joint clips are bolted through the track. No sagging.
3/16"
1¼"
2½"





Weight 5,000 pounds; pulls three 14" bottom plows; 12 h. p. delivered to the drawbar; 25 h. p. at the belt; Waukesha, four-cylinder motor; Perfex Radiator; Hyatt Roller Bearings; burns gasoline, kerosene or distillate; center draft; two speeds, 2½ and 4 miles per hour.

DIRECT DRIVE

Conserves Power in the HUBER LIGHT FOUR

TRACTOR economy and tractor power depend largely on the proportion of the power developed by the motor that is delivered to the drawbar.

In simplicity and economy the direct spur gear drive of the Huber Light Four is unequalled. There are no bevel gears—simply a friction clutch and spur gear reduction to the driving wheels.

12 H. P. on Drawbar

25 H. P. on Belt Pulley

THE HUBER Light Four

Draws three bottoms

Turns an acre an hour

Other reasons why the Huber develops such large power in proportion to its weight are: the high wheels roll easier and afford a larger area of "traction grip"; center draft conserves power by avoiding "side pull"; high grade extra strong materials reduce weight.

These features are the result of 20 years development by one of the pioneers of the industry. They are behind the Huber reliability that has created thousands of satisfied Huber owners.

Write for "The Tractor in the Making." It tells the interesting history of tractor development.

The Huber Manufacturing Co.
MARION, OHIO

Barkley Tractor & Separator Co.
Edmonton, Alberta

The Huber Manufacturing Co.
Brandon, Manitoba

Some good territory is still available for live dealers

NEWS — OF THE TRADE FOR THE TRADE

ONTARIO

OTTAWA.—A mid-winter auto show will likely be held next March.

GUELPH.—Brown and Little, Ford agents, will build a new garage.

CHATHAM.—Fire destroyed Sam Lenover's garage. Damage, $800.

CHATHAM.—The Farmers' Garage, F. Rankin, proprietor, is now open for business.

HAMILTON.—Frank Averill Fox, inventor of the Fox anti-skid chain, is dead, aged 62.

PARIS.—Henry Kohlbrenner, aged 55, who conducted a garage at Paris Junction, is dead.

STONEY CREEK.—L. T. and R. C. Springsteed Bros. are building a fine new brick garage.

EGANVILLE.—J. W. Gallagher and A. A. Leroy, "Eganville Garage," have dissolved partnership.

EXETER.—The garage recently conducted by T. Baker has been re-opened under the management of Ed. Snell.

TORONTO.—Quarterly dividends of 1¾% have been declared on Russell Motor, preference and common shares.

VARS.—Of the 200 farmers who attended the recent U. F. O. convention, 57 drove here in their own automobiles.

CHATHAM.—The Dowsley Spring and Axle Works, Spring Building, was entirely gutted by fire. Loss $50,000.

HAMILTON.—The City Engineer is on the war-path against tractors driving over his streets and damaging them.

WINDSOR.—By vote of the citizens, the Fisher Body Co. has been placed on a very satisfactory fixed assessment basis.

COBOURG.—E. A. Duncan has purchased the Coliseum movie house and will turn it into a garage and show room.

THOROLD.—Fire completely destroyed Constable Bros'. Garage. The total loss is about $20,000, with only $3,300 insurance.

TORONTO.—G. E. Gooderham and Co., Chevrolet distributors, has signed an order for $1,750,000 worth of "Chevs" for the next year.

HAMILTON.—H. Gracey, T. H. Loughlin and W. E. Traves, formerly salesmen at the I. H. C. Hamilton office, are now blockmen.

CHATHAM.—It is expected that the Denby Motor Co., truck manufacturers, will shortly place a touring car at $1,650 on the market.

OSHAWA.—George W. McLaughlin, of the McLaughlin Motor Car Co., has presented a very fine X-ray equipment to the Oshawa hospital.

OTTAWA.—Just Motors, Limited, Ford distributors, has considerably remodelled and improved its premises, 223 to 225 Queen Street.

GUELPH.—The Robson Motor Car Co. premises were entered recently by a burglar, who took the bills from the safe but left the silver in the till.

WHITBY.—If the Hydro extension goes through, Whitby expects to "land" a $2,000,000 investment—offered by a large American automobile concern.

BLENHEIM.—J. W. Fleming and Son, McCormick agents, have just completed the sale of their third car during 1919 season of International tractors.

PARKHILL.—Chester Rawson and Douglas Calvert have purchased the interests of Routledge and Nichol, auto machinists, and will conduct an up-to-date repair shop.

CHATHAM.—A. B. McCoig, M. P., Deering agent, is building a side addition and another storey to his premises shortly. He has just delivered his ninth carload of I. H. C. tractors.

LONDON.—T. S. Lawrason, who sells Deering machines, has had a very successful and strenuous year, and took his reward the past fortnight by holidaying at Excelsior Springs, Missouri.

LONDON.—W. W. Muir, formerly working out at the Brandon, Man., branch of the I. H. C., has been transferred to London, and, with his family, taken up his residence at Harriston.

OWEN SOUND.—A customer buying gasoline at Bowman's Garage struck his match on the gas tank. A brisk fire was the result, but the flames were quenched before much damage was done.

LONDON.—E. C. Duffy, of the I. H. C. Chicago office, visited Hamilton and London branches recently, and also called upon some of the Ontario dealers handling the International Motor trucks.

WALKERVILLE.—Canadian Products, Limited, a subsidiary of General Motors, will likely start production this month, and an annual turn-out of 50,000 sets of axles and transmissions is expected.

OSHAWA.—The Jackson Motor Corporation is building a new show room and garage. The floor space will be 50 feet by 150, and it is expected the new place will be ready to move in the end of this month.

ORILLIA.—The head office of Carriage Factories, Limited, which has been located for eighteen months in Toronto, has been moved to Orillia, where the staff will occupy the premises of the Tudhope Carriage Co.

OTTAWA.—D. G. McGowan, sales manager of the Dixon Motors, has closed contracts by which his organization will be exclusive distributors in this district of the Marmon and Winton cars. This company also handles Studebaker, Maxwell, Chalmers and Briscoe.

MANITOBA

WINNIPEG.—The city has bought two Sterling 3½-ton trucks.

WINNIPEG.—H. G. Middleton has relinquished his Royal Oak tire agency.

EMERSON.—Buchanan and Parkes will build a $10,000, 50 feet by 100 feet, garage.

PORTAGE LA PRAIRIE.—Finch Bros. have opened an auto and tractor business.

WINNIPEG. — Canada Dry Cells suffered heavily by fire. Loss is covered by insurance.

WINNIPEG. — The Lalley Farm Lighting Co., distributors of electric lighting plants, has commenced business in this city.

NORWOOD.—Contant Bros., garage owners and auto accessory dealers, have rented their business to the Norwood Garage and Motor Co.

WINNIPEG.—The Elmwood Machine Works has decided to erect a $15,000 garage, 100 feet by 70, for all kinds of repairing, vulcanizing, etc.

WINNIPEG.—The Swedish Separator Co., Chicago, has opened a branch office at 714 Confederation Life Building, with J. E. McMurray as manager.

WINNIPEG.—C. J. Brittain, manager of the Canadian Fairbanks-Morse Co., and D. Drehmer, manager of the John Deere Plow Co., have been appointed to the executive of the newly-organized Citizens' League.

PORTAGE LA PRAIRIE. — Aultmann and Jones Co., manufacturers and distributors of tractors and separators, a well-known American firm, have purchased the old Hart-Parr building, and will open their Canadian Western branch this month.

WINNIPEG.—The Twin City Separator Co.'s large additions to their plant have been completed, and are now occupied.

SASKATCHEWAN

REGINA.—W. T. McLellan is operating a new automobile agency.

SWIFT CURRENT.—C. W. White, implement dealer, has discontinued business.

REGINA.—Bowman Bros., auto supply dealers of Saskatoon, have opened a branch here.

IRMA.—J. W. Watt has sold out to Moore Bros. They will run a garage and service station.

TISDALE.—J. W. Roy, automobile dealer, has taken in a partner. The firm is now Roy and Senary.

REGINA.—A new Canadian implement firm, Tillers Machinery, Ltd., capital stock $50,000, has been formed.

WADENA.—Harris and Co., tractor dealers, have enlarged their organization. The firm is now McPherson, Harris and Co.

STROME.—H. W. Schenk, harness dealer, and Alex. Scrimgeour, implement dealer, suffered considerable loss through fire.

REGINA.—Late this fall or early in the spring a $30,000 garage, with 50 feet of frontage and 100 feet deep, will be built here for the Gray-Dort agency, on a site just south of the Coca Cola plant in Cornwall street.

SASKATOON.—J. Nichol, manager of the local Massey-Harris branch, has been elected president of the Saskatoon branch of the Canadian Manufacturers' Association, and A. I. Turnbull, of the Canadian Fairbanks-Morse Co., has been elected secretary.

REGINA.—J. W. Broderick and W. T. Rogers have purchased the stock which H. Williams held in the Saskatchewan Motor Co., Ltd., and now own the entire stock of the company. This is the largest automobile business in Saskatchewan. During the past year they have sold twenty thousand cars.

ALBERTA

DIDSBURY.—Shannon Bros. have opened a new garage.

EDMONTON.—H. C. Stevenson has opened an automobile business.

PINCHER CREEK. — McDermott and Morgan have opened a garage.

EDMONTON.—F. W. Smith, formerly I. H. C. salesman, is now blockman in this district.

CALGARY.—W. S. Kickley. Ford Maclin Motor Car Co., Ford dealers, has been seriously ill with pleurisy.

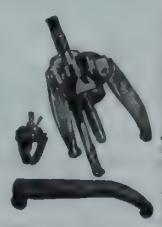
CALGARY.—A. D. Metcalfe has been promoted to sales manager of the Great West Motors, Overland distributors.

CALGARY.—W. S. Winkley, Ford distributor, is waking up the town with a new, flashing green Ford sedan, with disc wheels.

EDMONTON. — E. A. ("Dad") Quinsey, well-known motor salesman, with McLaughlin Motor Car Co., was found dead recently.

CALGARY.—Roy N. Gourlay, well-known mechanical expert, has taken over the management of the H. H. Kerr Motors, Provincial Hup distributors.

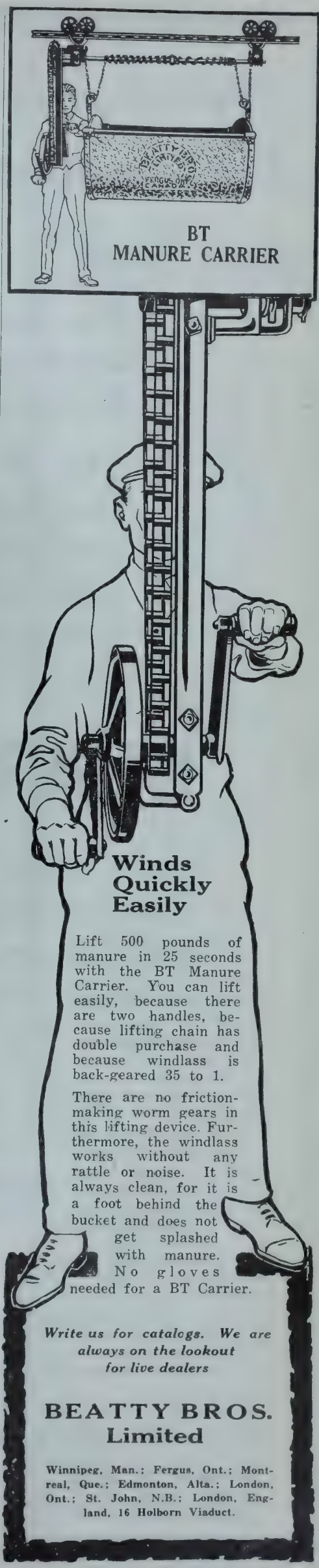
CALGARY.—Pete Egan, formerly manager of the local branch of the Hart-Parr Co., has been promoted, and taken up the duties of assistant sales manager of the Canadian Co., with headquarters at Winnipeg.



SAYS THE MASTER MECHANIC: The Greb Automatic Grip Puller is a One-Man Puller — Quick-acting, strong and simple in the extreme. May be locked in any desired position. A combination of two or three arms. Heavy Duty Size capacity 1" to 16" — Junior Size capacity 1" to 7". Two sets of jaws furnished with each size.

TEN DAYS' TRIAL. — If your dealer or jobber does not have them we will send you one. Try it ten days. If not satisfactory, return to us and we will refund your money. We also make the GREB RIM TOOL.

THE GREB COMPANY, 319 State St., BOSTON



Winds Quickly Easily

Lift 500 pounds of manure in 25 seconds with the BT Manure Carrier. You can lift easily, because there are two handles, because lifting chain has double purchase and because windlass is back-geared 35 to 1.

There are no friction-making worm gears in this lifting device. Furthermore, the windlass works without any rattle or noise. It is always clean, for it is a foot behind the bucket and does not get splashed with manure. No gloves needed for a BT Carrier.

Write us for catalogs. We are always on the lookout for live dealers

BEATTY BROS. Limited

Winnipeg, Man.; Fergus, Ont.; Montreal, Que.; Edmonton, Alta.; London, Ont.; St. John, N.B.; London, England, 16 Holborn Viaduct.

A *special* lubricating oil that makes separators run more smoothly and last longer

The Sharples Separator Company, the pioneer and largest manufacturer of separators, has made and put on the market a special oil for separators.

This oil has been perfected after many tests in the Sharples factory---first to make a separator run faster and better, and second, to keep the separator in a uniformly good condition. Fifty per cent of the breakdowns in all separators is due to the use of the wrong oil. The high speed which a separator attains requires

SHARPLES SEPARATOR OIL

As a dealer, you should feature and sell Sharples Separator Oil because of the large profit it pays and because every owner of a separator, emulsifier or clarifier is a logical prospect. The field is *wide open.*

The strong, handsomely lithographed container is an advertisement in itself. Display it on shelf or showcase. It will attract attention and bring sales. Arrange now for an advertising display of Sharples Separator Oil.

Write today for full particulars, prices and selling plan.

P-85

Sharples Separator Oil comes in quart and gallon cans.

The Sharples Separator Company, Toronto, Ont. Regina, Sask.

THE LOUNSBURY CO. Newcastle, N. B.

Distributors through all their branches
"Over 2,425,000 Sharples Separators in Daily Use"

J. CLARK & SON Fredericton, N. B.

Mr. Dealer!

IF

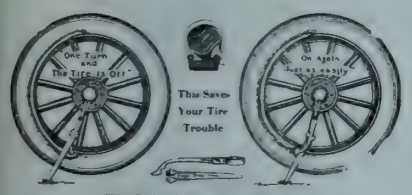
Price
Quality of Material
Workmanship
Close Skimming
and
Easy Turning

are considered by your customers in buying a Cream Separator, then we claim that the

Sanitary King

is the best buy in Canada to-day. Write for prices and terms.

King Separator Works of Canada
Limited
Bridgeburg or Whitby, Ont.



DEALERS

The Case Tire Tool is

The Fastest Selling Auto Necessity

Liberal Profits. Quick Returns.

Order from 2 to 5 dozen to-day from

YOUR JOBBER

and write us for circulars and display advertising matter

Free Demonstrating Stand to all dealers ordering ten dozen or more at one time.

Seven jobbers in Winnipeg and several in Toronto, etc., handle the new and wonderful

CASE TIRE TOOL

Motor Necessities Co. of Canada
231 Somers t Building, Winnipeg, Man.

The Lesser Evil.—"Why didn't you stop when I signaled you?" inquired the officer.

"Well," replied Mr. Chuggins, "it had taken me two hours to get this old flivver started, and it seemed a shame to stop her merely to avoid a little thing like being arrested."—*Washington Star.*

* * *

Wrong Ammunition.—"Boozer likes to talk about his aim in life."

"His aim may be all right, but he has the wrong kind of a load."—*Boston*

Dairy *and* Household Supplies

NOTES FOR DEALERS

THE inquiries being made into city milk prices will likely send more farmers to the cream separator or condensery.

The man with the high producing cow is the man who least fears the high costs of feeds.

Ask the man with water bowls in his stables how the cows enjoy it.

Perhaps a small water tank with a regulation float in it would give some visitor an idea in installing better fixtures.

Ontario has a good crop of ensilage corn this year and it is being ensiled in good shape.

It is a good time to take a trip through the district to note how the ensilage and engines are working. Note any prospects for new machines next year and put them on your list.

Are you acquainted with the varieties of Dent corn that are being used most successfully?

A few good tall stalks of corn with a neat card attached telling variety and height—and planting data, with the name of the machine being used on the field, would make mighty attractive matter for your shop.

Now is the time to encourage winter butter production. Prices are high and more money can be made from butter as well as holding the milk on the farm. Cream separators are the boys to do this work.

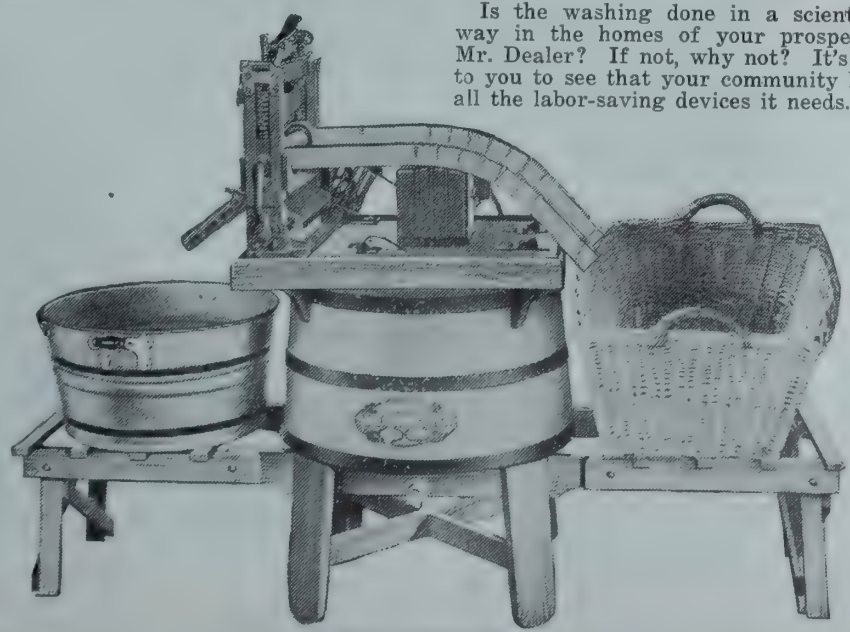
Many a good farmer can be prevented from being discouraged and selling by a timely word telling how to do things better and easier. Suggestions are always in order in an implement dealer's shop.

There is no surer way to make farming go than through the dairy route. Dairymen always have ready money and generally use the monthly cheque habit.

NEW POWER WASHER

THIS washing machine, called the "Klean Kwick," has been placed on the American market recently by the Drummond Mfg. Co., Cedar Falls, Iowa. These machines are built with either wood, galvanized or copper tub.

This electric machine is complete with instantaneous safety release, bottom drain or outlet, connecting cord with plug and metal clothes chute. With the Vacuum principle of washing, the time required to wash clothes clean has been reduced to a minimum. In from three to five minutes, over a thousand gallons of boiling hot suds and steam are forced through the clothes, which are through the washer in one third the time required by the ordinary dolly or peg type, or other make of Washers, and the additional rubbing on a wash board or boiling of clothes is entirely eliminated with the use of the KLEAN KWICK Vacuum Washer.



"Klean Kwick" Washer.

THE WIFE'S ARGUMENTS

WHY must washing machines come into universal use throughout the country? Here is the answer: The farmer cannot secure the utmost of production unless he uses machinery—labor-saving devices—wherever and whenever possible. Additional labor on the farm means extra work for the farmer's wife.

Will she, alone, be expected to carry the increased burden of the kitchens and home or will she persuade her husband to instal for her labor-saving household devices? Who will keep the clothes clean

Will the farmer's wife spend her days over the old-fashioned, obsolete washtub and her nights over the old-fashioned ironing board? Or will she purchase a washing and ironing machine?

Will she break her back and ruin not only her own health, but endanger that of the next generation by working over a washboard, or will she save her time, her money, and her health by using a washing machine?

In the rural home the washing has to be done at home, where, for sanitary reasons, the family washing ought to be done. Why should it be done by old-fashioned methods?

If the intelligent farmer who has purchased up-to-date, labor-saving implements for use in his work will but think about it, he will not permit his wife to kill herself and endanger the life of the coming generation doing her housework by ancient methods.

Farming in this country is daily becoming more and more of a science. Successful farming demands the latest labor-saving devices and machinery. The latest discoveries and methods concerning farming and dairying such as the "Babcock test," etc., have made farmers become efficient in order to attain success. The same thought and attention which has been applied to farming and farm methods if applied to the daily household tasks would revolutionize the work of the farmer's wife.

Is the washing done in a scientific way in the homes of your prospects, Mr. Dealer? If not, why not? It's up to you to see that your community has all the labor-saving devices it needs.

Cows Can't Splash

Because

The BT Water Bowl is deep and narrows toward the bottom. This shape prevents the cow from splashing the water. She will never learn the habit of splashing or playing with water if the bowls are BT Bowls.

If, before putting in the BT Water Bowls, a cow has learned to splash she can be cured in the following way: Bend the float rod in the regulating tank so as to lower the water in the bowls about 4 inches. When the cow is cured bend the float rod back again and allow the bowl to be filled.

This is just one advantage. The BT Bowl has many advantages over the old-fashioned flat, shallow bowls.

For further information about BT goods, write to

Beatty Bros. Limited

Winnipeg, Man.; Fergus, Ont.; Montreal, Que.; Edmonton, Alta.; London, Ont.; St. John, N.B. 16 Holborn Viaduct, London, Eng.

BT WATER BOWLS

CANADIAN Motor Tractor and Implement Trade Journal BUYERS DIRECTORY

This directory will help you with your buying and your planning. The advertisers listed here are thoroughly reliable and leaders in their respective fields. They are looking for live, wide-awake representatives. Study their advertisements carefully because they contain valuable information which will dovetail with your plans. We are glad to go to the trouble of arranging this list—to make it easy for you to select new lines. If it so happens that what you want is not here, write us, and we will tell you where to get it.

AUTO ACCESSORIES
Can. Fairbanks-Morse Co., Ltd., Montreal.
Can. General Electric Co., Ltd., Toronto.
Kales Stamping Co., Detroit, Mich.
Kinzinger Bruce Co., Niagara Falls, Ont.
Northern Electric Co., Ltd., Montreal.
Champion Spark Plug Co., Windsor, Ont.
The Greb Co., Boston.
Cooper Auto Supply Co., Thomasville, Ga., U.S.A.
Motor Necessities Co. of Canada, Winnipeg, Man.

AUTOMOBILE CHAINS
Can. Fairbanks-Morse Co., Ltd., Montreal.
Can. General Electric Co., Ltd., Toronto.

AXLE GREASE
A. W. Harris Oil Co., Providence, R. I.
Prairie City Oil Co., Ltd., Winnipeg.

BARN EQUIPMENT
Beatty Bros., Ltd., Fergus, Ont.

BINDERS
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
International Harvester Co., Ltd., Hamilton, Ont.

BELTING
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

BATTERIES
Can. Fairbanks-Morse Co., Ltd., Montreal.
Can. General Electric Co., Ltd., Toronto.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

CARRIAGES
Cockshutt Plow Co., Brantford, Ont.

CREAM SEPARATORS
King Separator Co., Bridgeburg, Ont.
R. A. Lister Co., (Canada) Ltd., Toronto.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.
Sharples Separator Co., Toronto.

CEMENT MIXERS
Can. Fairbanks-Morse, Ltd., Montreal.

CASTINGS
Joliette Steel Co., Joliette, P.Q.

CORN HARVESTERS
Cockshutt Plow Co., Brantford, Ont.

CULTIVATORS
Cockshutt Plow Co., Brantford, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.
International Harvester Co., Ltd., Hamilton, Ont.

CUTTERS
Butterfield & Co., Inc., Rock Island, Que.

DAIRY SUPPLIES
International Harvester Co., Ltd., Hamilton, Ont.
R. A. Lister Co., (Canada) Ltd., Toronto.

DITCHING MACHINES
Can. Fairbanks-Morse Co., Ltd., Montreal.

DRILLS
Cockshutt Plow Co., Brantford, Ont.
John Deere Mfg. Co., Welland, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.

ENGINES
Can. Fairbanks-Morse Co., Ltd., Montreal.
Gilson Mfg. Co., Ltd., Guelph, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
R. A. Lister Co., (Canada) Ltd., Toronto.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.
Sharples Separator Co., Toronto.

ENSILAGE CUTTERS
Can. Fairbanks-Morse Co., Ltd., Montreal.
Peter Hamilton Co., Ltd., Peterborough, Ont.
Matthew Moody & Sons Co., Terrebonne, P.Q.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

FEED CUTTERS
Can. Fairbanks-Morse Co., Ltd., Montreal.
Peter Hamilton Co., Ltd., Peterborough, Ont.
Renfrew Machinery Co., Ltd., Renfrew, Ont.

FARM MACHINERY
Can. Fairbanks-Morse Co., Ltd., Montreal.
Cockshutt Plow Co., Brantford.
John Deere Mfg. Co., Welland, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
The Frost & Wood, Co., Ltd., Smith Falls, Ont.
R. A. Lister Co., (Canada) Ltd., Toronto.
Matthew Moody & Sons Co., Terrebonne, P.Q.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

FINANCIAL
The Commercial Credit Co. of Canada, Ltd., Toronto.

GRINDSTONES
S. Vessot & Co., Joliette, P.Q.

GRINDERS
J. Fleury's Sons, Aurora, Ont.
Can. Fairbanks-Morse Co., Ltd., Montreal.
International Harvester Co., Ltd., Hamilton, Ont.
R. A. Lister Co., (Canada) Ltd., Toronto.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.
S. Vessot & Co., Joliette, P.Q.

GASTINE TABLETS
Robertson & Murphy, Ltd., Montreal.

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A. W. Harris Oil Co., Providence, R.I.
Prairie City Oil Co., Ltd., Winnipeg.
The Spedolene Refining & Mfg. Co., Ltd., Montreal

HARROWS
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The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.
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The Frost & Wood Co., Ltd., Smiths Falls, Ont.

HAY PRESSES
J. B. Dore & Son, Laprairie, Que.

HAY RAKES
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Peter Hamilton & Co., Ltd., Peterborough, Ont.

HAY CARRIERS
Beatty Bros., Ltd., Fergus, Ont.

LIGHTNING SYSTEMS
Can. Fairbanks-Morse Co., Ltd., Montreal.
Can. General Electric Co., Ltd., Toronto.
R. A. Lister Co., (Canada) Ltd., Toronto.
Northern Electric Co., Ltd., Montreal.

LITTER CARRIERS
Beatty Bros., Ltd., Fergus, Ont.

MANURE SPREADERS
Cockshutt Plow Co., Brantford, Ont.
John Deere Mfg. Co., Welland, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
The Matthew Moody & Sons Co., Terrebonne, Que.

MARINE FITTINGS
The Northern Electric Co., Ltd., Montreal.

MOWERS
Cockshutt Plow Co., Brantford, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
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R. A. Lister Co., (Canada) Ltd., Toronto.
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MILLING DRILLS
Butterfield & Co., Inc., Rock Island, Que.

ORCHARD TOOLS
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OILS
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The Renfrew Machinery Co., Ltd., Renfrew, Ont.
Prairie City Oil Co., Ltd., Winnipeg.
The Spedolene Refining & Mfg. Co., Ltd., Montreal

PISTON RINGS
WedgeRite Piston Ring Co., Ltd., Montreal.

PLOWS
Cockshutt Plow Co., Brantford, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

POLICE AND FIRE ALARM EQUIPMENT
The Northern Electric Co., Ltd., Montreal.

POWER MACHINERY
Can. Fairbanks-Morse Co., Ltd., Montreal.
John Deere Mfg. Co., Welland, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.
International Harvester Co., Ltd., Hamilton, Ont.

POWER ATTACHMENTS
Can. General Electric Co., Ltd., Toronto.

POWER AND LIGHT EQUIPMENT
The Northern Electric Co., Ltd., Montreal.

POWER SWITCHBOARDS
The Northern Electric Co., Ltd., Montreal.

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John Deere Mfg. Co., Welland, Ont.
Matthew Moody & Sons Co., Terrebonne, Que
Cockshutt Plow Co., Brantford, Ont.

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Champion Spark Plug Co., Windsor, Ont.

STABLE EQUIPMENT
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SLEIGHS
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The Silvex Co., Bethlehem, Penn.

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Gilson Mfg. Co., Guelph, Ont.
Huber Mfg. Co., Marion, Ind.
International Harvester Co., Ltd., Hamilton, Ont.
Advance Rumely Co., La Porte, Ind.
Chase Tractors Corporation, Ltd., Toronto

TRACTOR PLOWS
Cockshutt Plow Co., Brantford, Ont.
International Harvester Co., Ltd., Hamilton, Ont.

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The Northern Electric Co., Ltd., Montreal.

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Can. Fairbanks-Morse Co., Ltd., Montreal.
R. A. Lister Co., Ltd., Toronto.
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The Renfrew Machinery Co., Ltd., Renfrew, Ont.

THREAD CUTTING TAPS
Butterfield & Co., Inc., Rock Island, Que.

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Butterfield & Co., Inc., Rock Island, Que.

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Cockshutt Plow Co., Brantford, Ont.

WAGONS
Cockshutt Plow Co., Brantford, Ont.
International Harvester Co., Ltd., Hamilton, Ont.

WATER BOWLS
Beatty Bros., Ltd., Fergus, Ont.

WIRES AND CABLES
The Northern Electric Co., Ltd., Montreal.

WEEDERS
Cockshutt Plow Co., Brantford, Ont.

Butterfield

Drills, Taps, Dies, Reamers

Tools That Retain Their Keen Edges After Long Usage

The use of High Quality Tools on repair work is one of the essentials to the highest class job.

The quality of Butterfield Tools not only ensures accuracy but long service and economy.

Try them once and you'll want them *always.*

Butterfield & Co., Inc.

Rock Island **Quebec**

Toronto Office: **220 King St. West**

Champion

"Minute" Spark Plug Cleaner

This is the article that sells on sight to every motorist and every owner of a gasoline engine.

It's the simplest, most effective, and most economical spark plug cleaner on the market, eliminating dirty hands, soiled clothing, and all the exasperation that goes with cleaning spark plugs by the old method.

There's no need to take your plugs apart—

A little gasoline in the tube, screw in the plug, shake one minute, and the foulest plug is clean as new. The needles pick away the carbon from the most inaccessible spots and the gasoline does the rest.

Over half a million spark plug users in Canada offer a big market for this handy motor accessory. Practically everyone who sees the Champion "Minute" Cleaner will want one. Add it to your stock and suggest its use to your customers.

It will mean quick and profitable sales.

It carries the same guarantee of satisfaction as Champion Dependable Spark Plugs.

Order from your jobber to-day.

Champion Spark Plug Co.
of Canada, Limited
Windsor, Ontario

A Famous Trade-Mark That Wields a Powerful Influence

SENTIMENT and strict business sense combine to make the famous John Deere trade-mark a constant and powerful incentive to maintenance and improvement of quality in the production of John Deere farm implements.

IN sentiment the trade-mark is as a proud family name that must be kept free from debasement. It is an emblem of excellence in the years gone by—an heritage from a glorious past that must be passed on, its significance ever growing, to a still more glorious future.

IN a strict business sense, the trade-mark is a badge of quality that attracts purchasers and that must be rigidly upheld in order to keep the confidence of the buying public.

TO debase a single article bearing the John Deere trade-mark would be to weaken the confidence of the buying public in the entire line of John Deere tools. It would be commercial suicide.

WE are justly proud of the great institution that has grown up back of the John Deere trade-mark. Our aim is to promote this greatness of the House of Deere. We know that the accomplishment of our aim depends entirely upon the continued significance to the public of the familiar emblem that is stamped on all John Deere tools.

—We Want Live Dealers Everywhere. Write Us At Once Regarding 1920 Contract—

JOHN DEERE MFG. CO., LIMITED, WELLAND, ONT.

World-wide Tractor Industry Established in Canada

With headquarters in Toronto,
Backed by Canadian Money,
Operated by Canadian Manufacturers,

A purely Canadian tractor institution is rapidly getting under way.

This institution has purchased outright the interests of the Chase Tractors Corporation. The manufacturing and executive offices have been moved to Toronto. Chase Tractors will hereafter be manufactured in Canada. Not only the domestic trade, but export trade with Great Britain, United States and other foreign lands will be conducted from the Canadian plant in Toronto.

The Chase Tractors Corporation Limited, will conduct a world-wide business in Canadian-made Tractors. They will also manufacture and market a line of Motor Trucks.

In choosing Canada as the centre for this big enterprise, the manufacturers had in view the great agricultural future of Canada. This promises to be a tremendous market in itself. For Canada's vast farm lands cannot be developed without tractors.

Convert Munitions Plant into Tractor Factory

Behind this industrial project are men in a commanding position in the manufacturing world. Not only have they proven that they could produce shells to most exacting specifications in a highly satisfactory way—but that they could organize in an incredibly short time a plant with a tremendous output. From their plants over five million shells were sent overseas—a remarkable achievement!

The plant and the organization of engineering and mechanical experts that made this record have now been directed to the production of Chase Tractors and Motor Trucks.

Robert J. Cluff and William J. Cluff, who are organizing the new industry, have converted their large munitions plant into an efficient Tractor Factory.

Here their ideals in manufacturing will find expression in the production of Tractors that are right—in design, in construction, in adjustment.

The Tractors that leave the Chase plant will be as rigidly inspected and as thoroughly reliable as the shells which made Cluff Bros. Munition Plants so successful.

The Chase Tractor---a tested reliable machine

With high ideals as manufacturers, and with literally thousands of Tractors to choose from Cluff Bros. chose what they consider the ideal Tractor from the farmer's standpoint.

Simple in design, sturdy, powerful, the Chase Tractor represents nine years of constant engineering study and practical experience in Tractor building.

A low-riding tractor it can be used under trees for orchard work, on side-hills work and rough ground. It has no differential gears—thus it gets equal driving power on both rear wheels, giving it amazing power on hilly ground and for overcoming side-draft.

By throwing either rear wheel out of gear the driver can turn the Chase Tractor in very small radius.

The belt power comes directly from the crankshaft and is sufficient to run a 28-inch grain separator.

This Tractor with such improvements in construction as Cluff Bros.' ideals of manufacturing demand will prove a most dependable and profitable machine for the farmers to use.

Opportunities in every farming centre for enterprising business men

The Chase Tractor Industry creates openings for men of vision to establish themselves in a profitable business.

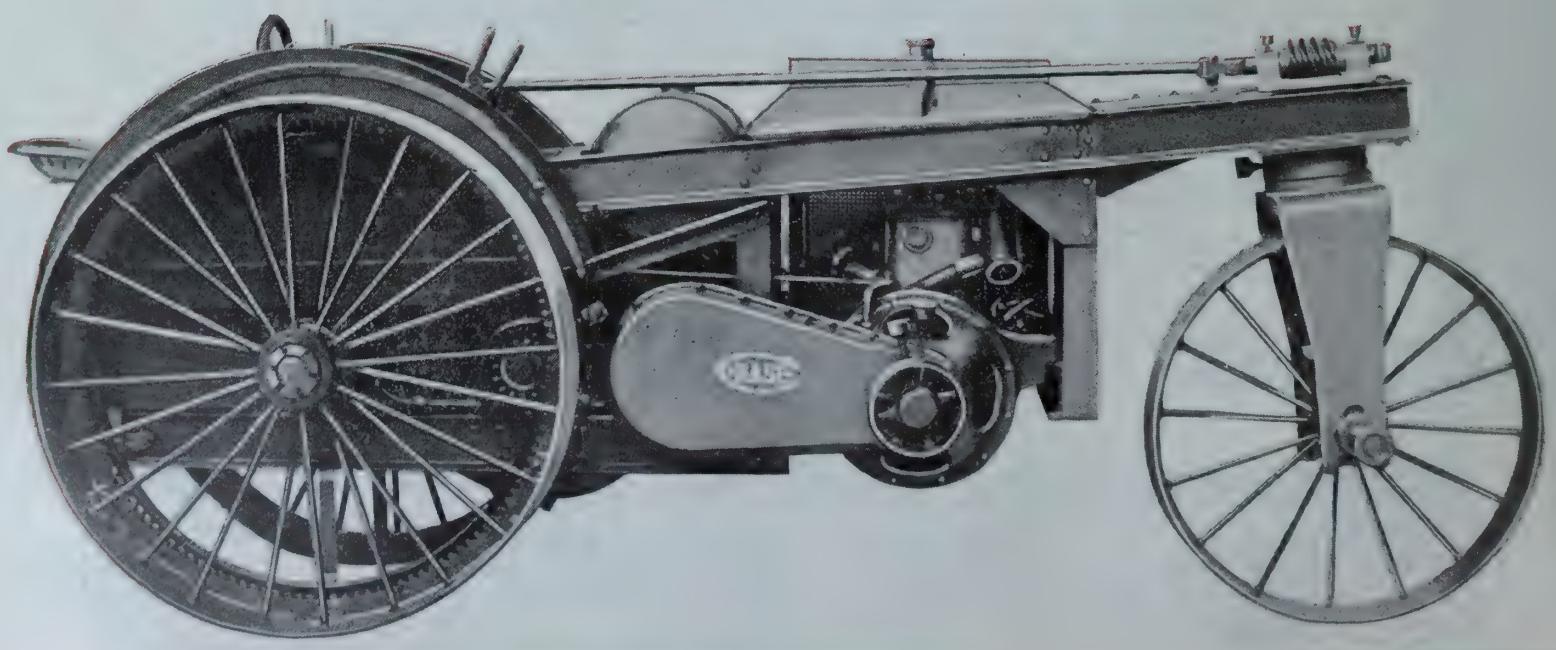
The selling of Tractors will repeat the successes that were made in the sale of automobiles. Hundreds of big selling organizations will grow up within the next year to handle the demand for tractors, and service to tractor owners.

In the aggregate, the profits to be made from selling Tractors will greatly exceed the factory profits. Men who link their fortunes with the Chase industry, who establish themselves locally as Chase dealers, will build up local industries of magnitude.

With an organization such as the Chase Tractors Corporation, Ltd., behind them; with a dependable, efficient Tractor like the Chase to create a good will for them, there is no limit within reason to the business a local selling station can create.

The Chase Tractors Corporation Limited invites correspondence with men with the business vision and experience to build up big local selling and service organizations.

CHASE TRACTORS
CORPORATION Limited, Toronto



CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Published Monthly by THE MACLEAN PUBLISHING COMPANY, LIMITED, TORONTO

MONTREAL, Southam Bldg. WINNIPEG, 1103 Union Trust Bldg. VANCOUVER, 39 10th Ave. West. LONDON, ENG., 88 Fleet St., E.C. 4. NEW YORK, 111 Broadway. BOSTON, 734 Old South Bldg. CHICAGO, 1401 Lytton Bldg

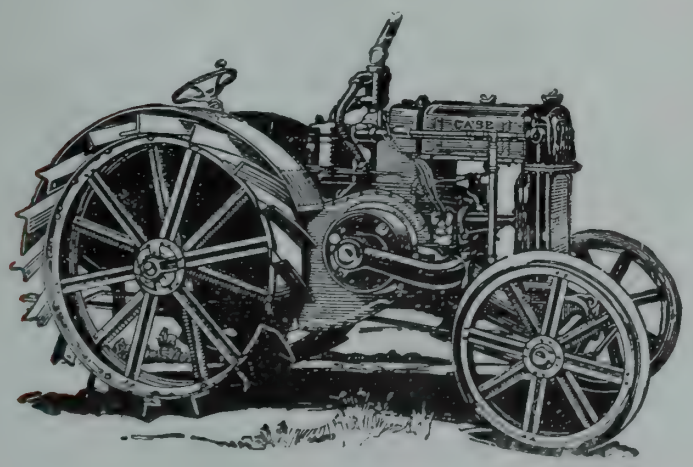
VOL. 1, No. 9 TORONTO, NOVEMBER, 1919 Subscription Price $1.00 Per Year

CASE

Kerosene Tractors

Wherever tractors are in use the Case Kerosene Tractor has long been recognized for its efficiency and dependability. Wherever increased production and the saving of labor and money are taken into consideration the Case 10-20 and 15-27 are the practical tractors.

This is why Case Tractors form an important unit in the stock of the dealer who sells farm machinery. The Case is the most saleable of tractors because of satisfaction it gives in its work and the low cost of operation and upkeep. All this means bigger sales and the consequent increased profits to the dealer who sells Case Tractors.



Fairbanks-Morse Power Farm Equipment

—embraces a line of machinery that insures the dealer of a bigger and better business in those things that are necessary to the up-to-date farm. As essential as the tractor is the "Z" Engine — the more-than-rated-power engine — that is being used by over 200,000 farmers. This is the quickest-selling power unit that a dealer can offer his customers, because of its power, its low first cost and its minimum fuel cost.

Fairbanks-Morse water systems, electric lighting plants and other equipment for the farm afford the dealer a field which means more business and larger profits.

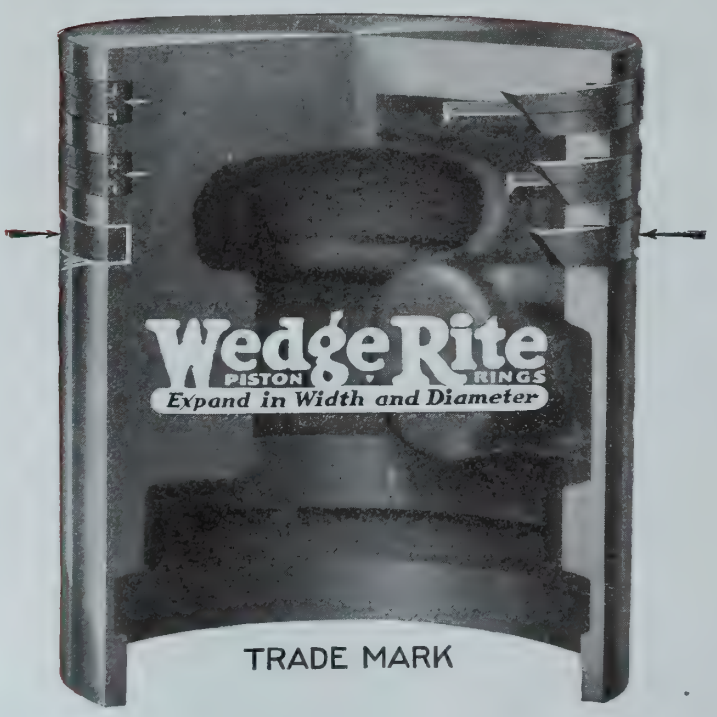
Write us to-day about the Case Tractor and other Fairbanks-Morse Power Farm Equipment.

The Canadian Fairbanks-Morse Co., Limited

Halifax, St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor.

WedgeRite Piston Rings are Always Tight

They fit tight and stay tight because of the special wedge construction (see illustration). An inner wedge-shaped ring forces two outer rings apart, both in width and diameter, which compel the rings to adapt themselves to the shape of the cylinder walls, fill all grooves and automatically take up all wear.



The waste of gasoline and oil is prevented, carbon is reduced and more power is delivered.

For economy and more power, always specify WedgeRite Piston Rings for your engine

In the illustration the two upper rings are WedgeRite. Note how tightly they fit. No chance here for oil or gas to get by. The black arrow points to an ordinary one-piece ring and shows the space through which oil and gas can leak.

Demand WedgeRite Piston Rings

MANUFACTURED BY

WedgeRite Piston Ring Company, Limited

92 Notre Dame Street East, Montreal

Canadian Sales Agent

DONALD F. JOHNSTON

TORONTO WINNIPEG MONTREAL

Avery Tractors

Farmers from all parts of the Province saw Avery Tractors do wonderful work at Ottawa Tractor Demonstration and Chatham Plowing Match

"Avery" Tractors have been tried out and proven a success by tens of thousands of farmers in this and other countries. They're at the front in every important contest.

Low cost of maintenance is a big "Avery" feature and it appeals strongly to prospective buyers everywhere.

EVERY ADJUSTMENT, REPAIR OR REPLACEMENT CAN BE DONE ON THE FARM.

Even the cylinder walls are renewable. When cylinder walls become worn, new walls can be purchased at small cost and fitted with the assistance of your own farm help.

The "Avery" is built in seven sizes—a size for every size farm—and sold at popular prices, including complete equipment.

"LISTER" ENGINES

2, 3, 5, 7 and 9 h.p.—Standard Hopper Cooled, throttle governed, automatically lubricated and equipped with high tension magneto. Easy to operate. Economical.

"LISTER" MILKERS

With the installation of a Lister Milker begin big savings of money, time and labor. The Cows Like It. It follows nature in action—milks like the calf.

MELOTTE CREAM SEPARATORS

The original Melotte. The world-famous separator without an equal.

"LISTER" GRINDERS

Guaranteed to do more work (whilst grinding as fine) than any other grinder made or offered for sale in Canada, the same power being used and all other conditions being equal.

OTHER PROFITABLE "LISTER" LINES

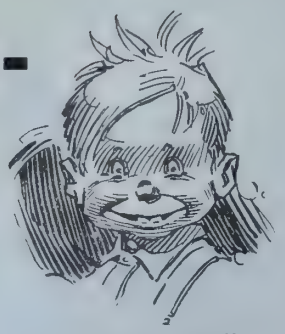
Become a "Lister" agent—there is a substantial commission in it. Write for our agency proposition.

R. A. LISTER & CO. (CANADA) LIMITED

58-60 Stewart Street, TORONTO -:- Also at Wall Street, WINNIPEG

"JOHNNY-ON-THE-SPOT"

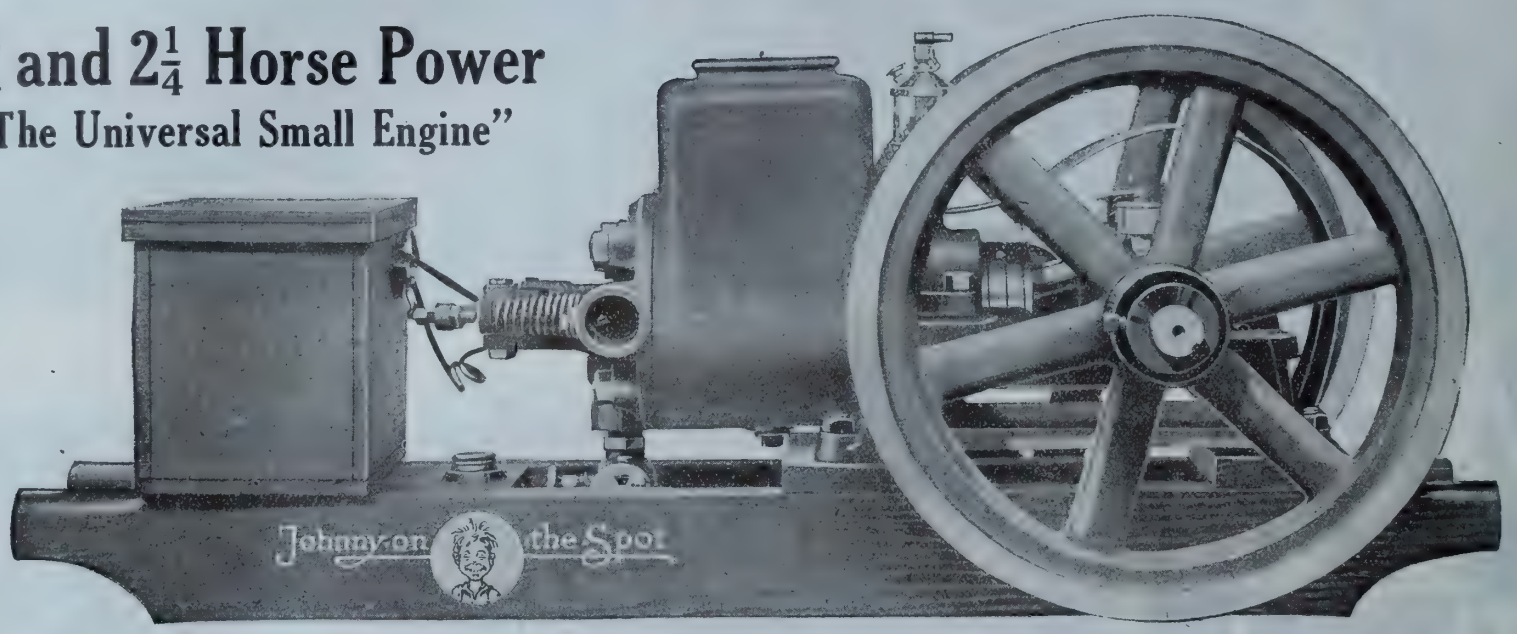
Gilson Engine



"Goes Like Sixty"

$1\frac{3}{4}$ and $2\frac{1}{4}$ Horse Power

"The Universal Small Engine"



HELLO! MR. IMPLEMENT MAN!

I know a whole lot of farmers near your town who want me to go to work for them.

I'm some worker, you bet!

Now listen, you implement dealer!

The farmer who needs me will pay ***you*** a nice round profit if you will put me on his farm. And every time I go to work for one of your customers, his neighbors will want me or one of my larger GILSON brothers. I have made money for hundreds of dealers, and the list is growing fast.

Other Gilson Money-Making Products

Silo Fillers
Silos
Tractors
Manure Spreaders
Feed Grinders
Wood Saws
Threshers, Etc.

"Johnny-on-the-Spot"

—is the lowest priced "Quality" small engine in Canada
—has the largest sale of *Any* engine of the same size in Canada
—will bring you "repeat" orders and boost your engine sales on all sizes
—will make you the most money

and

the leading "Power Merchant" in your territory

GET OUR PROPOSITION TO-DAY

Believe Me, Mister, this is your opportunity to make big money—don't fail to grasp it! Our wonderful, money-making proposition is ready for you. Get a piece of paper and pencil and write us! AND DO IT NOW!

Please, Mister---DO IT NOW!

Yours for more sales,

"Johnny-on-the-Spot"

GILSON MFG. CO., LIMITED

Dept A. - Guelph, Can.

Branch Office—352 Elgin Avenue, Winnipeg

A Year 'Round Market

for the

Cletrac

TANK-TYPE TRACTOR

CLETRAC Dealers the country over enjoy a year 'round active market—there are no periods of sales stagnation—no months when they must be content without sales—not a day in the year when they must close up shop because there is no immediate need for the Cletrac.

There are a thousand and one jobs on the farm that the Cletrac will do better than horses or mules during the winter months. It will clear the wood lot when the footing is wet, slippery and muddy; it will saw wood, grind feed, run ditches and trenches, clear the roads of snow and harvest ice.

Then there is road cleaning and repairing for the township, city and county, and heavy hauling that neither trucks nor other types of tractors could handle in the muck and slush of winter roads.

The Cletrac lays its own broad metal tracks wherever and whenever there is work to be done. It is sturdy, compact and economical. It burns kerosene perfectly.

You will find a Cletrac dealership profitable every day in the year—winter as well as summer. It will help you to build business when other lines are slow.

Our book for dealers, "Sale Quality in Tractors," is a factful story of dealer opportunity. Send for your copy today.

The Cleveland Tractor Co.

of Canada, Limited

19125 Hydro Electric Bldg. **Windsor, Ont.**

Largest Producers of Tank-Type Tractors in the World

We are pleased to announce the return of the Acme Engines to the Canadian Trade.

Made in Canada

by

FISHER-WILKIE, LIMITED

SANDWICH, ONTARIO

Two Leading Manufacturers complete the world's greatest farm engine.

Fortunate dealers who enjoy sales contracts on this product positively dominate farm engine sales in their territory.

One manufacturer makes the engine; the other supplies the vital spark.

BOSCH MAGNETO

JUST think of the famous "Z" engine with a Bosch high tension, oscillating magneto—which delivers a steady succession of hot, intensive sparks.

Our national, zone, and local farm paper advertisements are telling every farmer in Canada to at once call on the nearest "Z" engine dealer and see the result of this recent epoch-making combination — FAIRBANKS - MORSE "Z" WITH BOSCH MAGNETO.

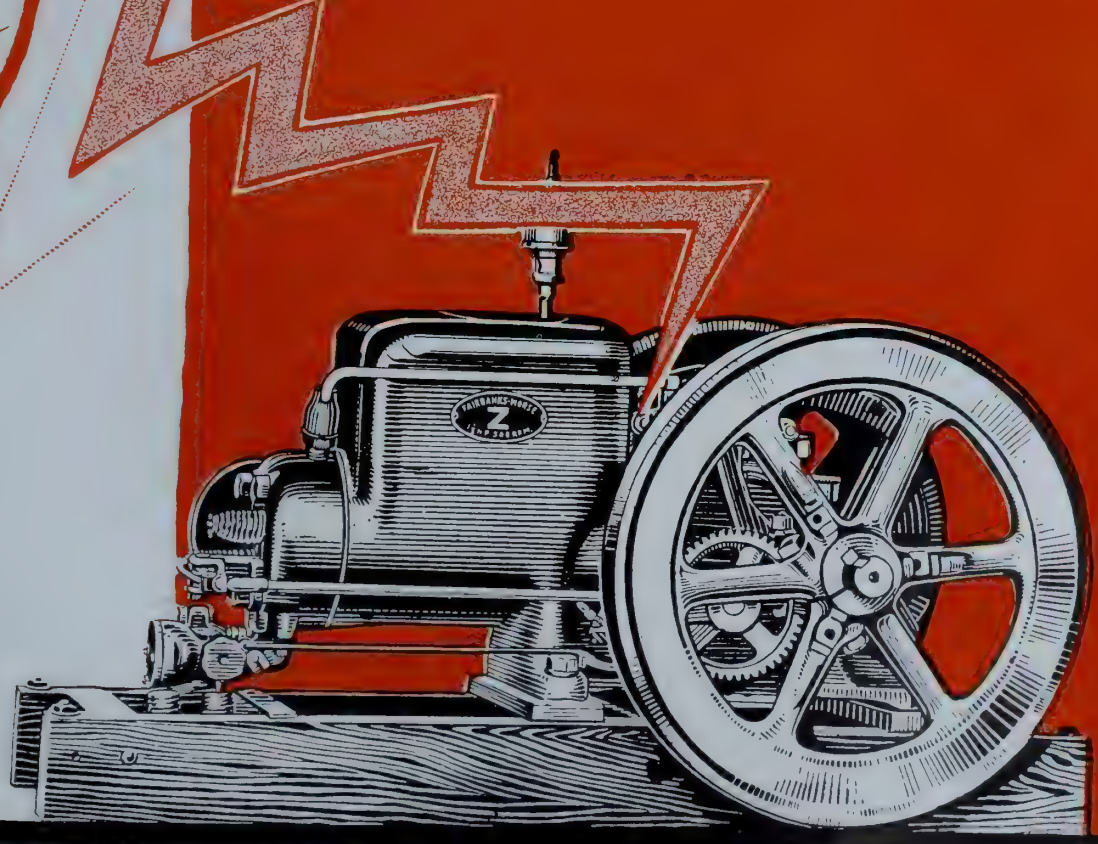
FAIRBAN
"
FARM

A combination whic
engine-selling proposit

MECHANICAL perfection, plus power—and right price—to date sold the "Z" to over 250,000 farmers.

This quality and quantity production enabled us to contract for a large proportion of the extensive Bosch facilities for making this one possible "Z" betterment—which establishes a new farm engine standard.

S-MORSE
"Z"
GINES



completes the biggest
n ever offered the trade

Available service through co-operation between The Canadian Fairbanks-Morse Co. Limited and all Bosch service stations throughout Canada

EVERY recognized Fairbanks-Morse "Z" engine dealer is an important link in this new national farm engine service chain—as vital a buying factor for every farmer as it is a selling factor for our dealers.

OUR salesmen are now explaining this new "Z" greater sales dominating power to a selected list of dealers.

The Canadian
Fairbanks-Morse O.K.
Co., Limited.

HALIFAX, N.S.
ST. JOHN, N.B.
QUEBEC, Que.
MONTREAL, Que.
OTTAWA, Ont.

TORONTO, Ont.
HAMILTON, Ont.
WINDSOR, Ont.

WINNIPEG, Man.
SASKATOON, Sask.
CALGARY, Alta.
VANCOUVER, B.C.
VICTORIA, B.C.

CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Volume I | TORONTO, NOVEMBER 5, 1919 | Number 9

OTTAWA *and* CHATHAM Power Farming Demonstrations Attracted 75,000 Attendance

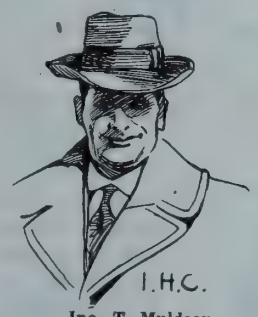
THE power farming demonstration held on the Booth Farm, just outside of Ottawa, October 14-16, fully achieved its purpose, and proved that Eastern Ontario and Western Quebec are completely and unequivocally "sold" on the tractor proposition. During the three days between 20,000 and 30,000 persons attended the Exhibition, and probably the most satisfactory feature of the "show" was the large number of farmers and dealers who were present.

At so many of the so-called "material tractor shows," in the United States during the past year a very large percentage of these in attendance has been composed of manufacturers, factory representatives, distributors, and others to whom a tractor demonstration is no more novel than—well, supposing you were invited out to one of the local parks to see an automobile go under its own power, actually! That was all right for two decades ago, but it's stale stuff now.

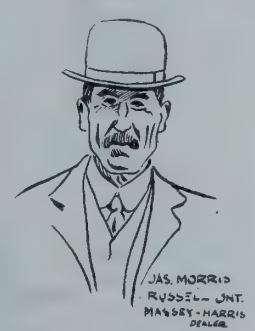
Probably, 95 per cent. or more of the Ottawa crowd consisted of farmers or dealers. Almost every man was a potential prospect—the dealer as a tractor distributor, the farmer for some dealer already aligned with the power farming forces. Dealers and farmers from all the surrounding counties on both sides of the Quebec-Ontario boundary followed the demonstrations with keenest interest. It was also interesting to see that the license "tins" on the 1,000 or more autos parked on the grounds showed that Ontario numbers were only very slightly in the preponderance.

THERE were no competitions. And there was no attempt made to show that tractors can be used with equal satisfaction and efficiency on belt work. This latter feature is one which should be borne in mind by any future tractor demonstration promoters. Any further tractor meets held in Canada will not fulfill their purpose completely unless the farmers and dealers are shown that a tractor can be most usefully employed cutting ensilage, sawing wood, running a thresher, and so on. The farmer and the dealer must be shown that the tractor is a 365-day-per-year machine.

More than a score of tractor manufacturers were represented, and as many more other firms, showing side-lines, were on the grounds. The Booth Farm was laid out very handily for the purpose designed, with three fields, sod and stubble, aggregating about eighty acres, devoted to the power farming. There were a score or two competitors in the horse-plowing contest, which took place on an adjacent field, and the contrast between the tractors efficiently and tirelessly pulling their two-, three- and four-bottom plows, and the ploughmen strenuously and perspiringly urging their "dobbins" to further effort, was very evident. Many a farmer would watch the tractors, then turn and watch the horses. How easy! That's what he would think as he watched the former.



Jno. T. Muldoon, Buckgrove, Que.



Why did I ever work that hard? Such were his thoughts as he turned to the latter.

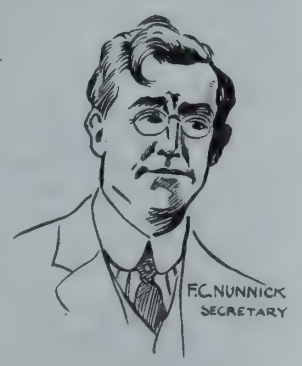
THE manufacturers and firms represented included the following:

The Cleveland Tractor Company, of Canada, Ltd., Windsor, Ont.—2 Cletrac Tractors.

The George White & Sons Co., Ltd., London, Ont.—Tractors.

The Renfrew Machinery Co., Ltd., Renfrew, Ont.—Two 12-24 tractors.

Chase Tractors Corporation, Limited, 28 Atlantic Ave., Toronto, Ont.—Two 9-18 tractors.



The Goold, Shapley & Muir Co., Ltd., Brantford, Ont.—12-24 tractor.

For Motor Company, of Canada, Ltd., (Montreal Branch), 119-139 Laurier Ave. E., Montreal, Que.—Six (6) Fordson tractors.

International Harvester Company, of Canada, Ltd., 294-8 Sparks St., Ottawa.—Four (4) tractors, 8-16 and 12-20.

The Canadian Fairbanks-Morse Co., Ltd., 39-41 Bank St., Ottawa—Case & Beeman tractors.

Massey-Harris Co. Ltd., Selby St., Montreal, Que.—One M. H. 12-25 Victory tractor.

J. I. Case Plow Works, Racine, Wis.—Four tractors and power farming machinery.

Aspinwall Canadian Company, Guelph, Ont.—Potato digger demonstrated with tractors.

Shinn Manufacturing Co., Guelph, Ont.—Lightning prevention apparatus.

Russell-Beach Motor Co., Ottawa.—Moline Universal tractor.

De Laval Co., Peterborough.—Lauson tractors.

Gilson Manufacturing Co., Guelph, Ont.—Gilson tractor.

R. A. Lister Co., Montreal.—Avery tractors.

John Deere Plow Co., Welland, Ont.—Tractor machinery.

Sawyer-Massey, Hamilton, Ont.—Tractors.

Cockshutt Plow Co., Brantford, Ont.—Farm machinery.

Frost and Wood, Smith's Falls, Ont.—Farm machinery.

Oliver Plow Co., Montreal.—Plows.

Petch Company, Ottawa.—Tents.

British American Oil Co., Ottawa Branch.—Gasoline and oil.

Imperial Oil Co., Ottawa Branch.—Gasoline and oil.

General Ordnance, New York City.—G. O. tractor.

Canadian Oil Company, Ottawa Branch.—Gasoline and oil.

Allis-Chalmers Manufacturing Co., Milwaukee—Allis-Chalmers tractor.

J. Clothier, Ottawa.—Emerson tractor.

D. C. Heron, Ottawa.—Milking machine.

Champion Spark Plug Co.—Spark plugs.

W. A. Rankin, Ottawa.—Washing machines.

Cushman Binder Motor, Winnipeg.—Binder motor.

Producers' Limited.—Milk and cream.

R. J. Devlin.—Furs.

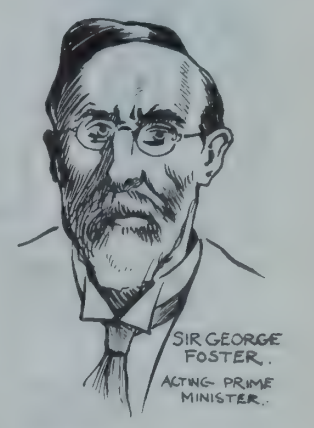
Delco Light.—Electric lighting plants.

McFarland and Douglas, Ottawa.—Metallic roofing.

McCartney Co.—Milking machines.

Spedolene Refining and Manufacturing Co.—Lubricants.

THE first day was a sort of "get-together" day, and the tractors and other exhibits were placed in their respective locations on the ground. Wednesday, the second day, proved to be one of the finest fall days the Ottawa Valley had ever experienced, and 12,000 or more persons visited the grounds. At a luncheon given various officials, guests and visiting newspapermen, Sir George E. Foster,



HOW OTTAWA SAW A PLOWING MATCH

The pictures are interesting. (1) A Lauson tractor discing. (2) 800 cars parked there. (3) Horses watch their rival go by. (4) A Happy Farmer on the job. (5) A view of the field. (6) A Moline Universal with discs. (7) Albert E. Pay, of Niagara-on-the-Lake, first prize plowman in sod. (8) Bert Kennedy, the Chatham champion, on a Fordson. (9) William Johns, of Deseronto, first prize in Indian class. (10) Happy Farmer 4-wheel type, with Cockshutt manure spreader. (11) Sir George Foster, Dr. Grisdale and others at the match. (12) Work the Cleveland did. (13) Chase tractor made a neat finish. (14) An Avery on the finish. (15) The Massey-Harris furrow is straight. (16) The barns and yard of the Central Experimental Farm. (17) Advance-Rumely 36 H.P. steamer with 12 plows, not at the show, but to show number of plows possible. (18) Barns and silos of the C.E.F.

40,000 Turn Out At Chatham

J. Lockie Wilson ejaculated, ecstatically: "Isn't this all worth while!"

"WELL, isn't this all quite worth while!"

The speaker was J. Lockie Wilson, managing director of the international plowing match, tractor and farm machinery demonstration, held at Chatham, October 21 to 23. As he voiced the above ejaculation, he swept his outstretched arms around a full circle of the horizon, and indicated the fields of the English farm, just south of the Chatham city limits, where between twenty and twenty-five thousand farmers, implement dealers, agricultural agents, distributors, manufacturers—and a fair sprinkling of women—were eagerly and interestedly following the work of the most representative gathering of agricultural operators ever brought together in one place in Canada.

The first provincial agricultural machinery demonstration held since the Armistice was an undoubted success. Just as was the case at the Ottawa show, more than nine-tenths of those who attended were farmers or dealers—and every one keenly interested in what was taking place. Probably there were more farmers at Chatham than at Ottawa, in proportion to dealers, and the horse plowing attracted exceedingly keen attention.

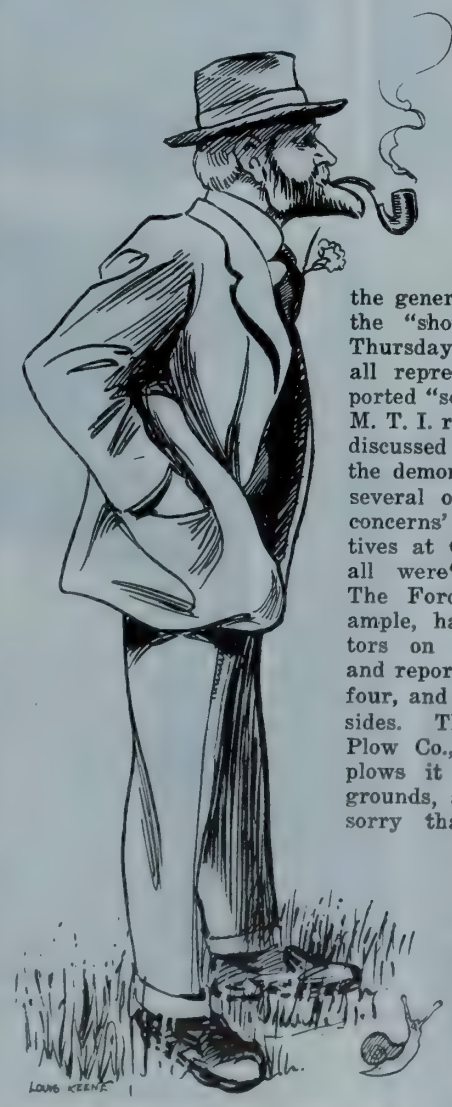
THE crowds started to gather in Chatham Monday night, and Tuesday was spent in getting everything into shape, and in the holding of some preliminary walking plow matches. Wednesday broke cloudy and threatening rain, but before noon the weather had cleared, and in the afternoon was so fine that complete success was assured. J. Lockie Wilson was asked how many cars were parked in a score and more locations on the 130-acre farm, and he offered to bet that there were 7,000 at least. As it would necessitate about fifteen or twenty miles of walking to verify this estimate, the bet was not taken. Mr. Wilson was offered three to one that he was wrong, but as the man on the other end of the wager stipulated that the genial managing director must count the cars, the bet was declared off.

There was one particular feature of the Chatham demonstration that was a specially good one—and one which should be followed in any future demonstrations of this kind held in Canada. It was this: all the tractors which entered into the final contest were driven by bona-fide farmers, or farmers' sons. This made the contest more interesting and more genuine. This year, farmers who also acted as local agents for certain manufacturers were allowed to compete, but next fall the Association's executive anticipates that farmers who are *also* dealers will be barred, making the competition even more exclusive. The winner, J. B. Cooperthwaite, is *solely* a farmer.

THE following is the list of exhibitors at the Chatham demonstration:

Chase Tractors Corporation, Toronto, 2 tractors; John Deere Mfg. Co., Welland, plows; Universal Car Agency, Windsor, Fordson tractors; Goodison Thresher Co., Sarnia, 3 Hart-Parrs; Robert Bell Engine and Thresher Co., Seaforth, 2 tractors, 1 thresher; Schofield Automotive Tractor, Orillia, 1 tractor; Canadian Oil Co., London, Ont; E. Leonard and Sons, Ltd., London, Huber tractor; Goold, Shapley and Muir, Brantford, 1 tractor; Renfrew Machinery Co., Renfrew, 2 tractors, plows; Cleveland Tractor Co., Windsor, Cletrac tractors; George White and Sons, London, tractor, grain separators; Canadian Potato Machinery Co., Galt, planters and diggers; Cockshutt Plow Co., Brantford, plows; International Harvester Co. of Canada, London, 4 tractors; Monarch Tractors, Brantford, 4 tractors; Canadian Aspinwall Co., Guelph, potato digger; Gilson Engine Co., Guelph, 1 Dixie Ace tractor; De Laval Co., Peterborough, cream separators; Soil and Crop Improvement Bureau, Toronto; Essex Tractor Co., Essex, Ont., 3 tractors; Sawyer-Massey Co., Hamilton, tractors; Imperial Oil Co., Toronto; R. A. Lister Co., Toronto, Avery tractors; Hemmie and Sons, Dublin, Ont., seeders; Canadian Fairbanks-Morse Co., Case tractors; Waterloo Manufacturing Co., Waterloo, tractor and thresher; A. R. Williams and Co., Toronto, machinery; Allison Hinde Co., Chatham, Moline tractors; W. G. Fisher, Orangeville, tractor accessories; Advance-Rumely Co., tractors; Gray-Dort Co., Chatham, cars; T. E. Bissell, Elora, Ont.; Shinn-Flat Lightning Rod Co., Guelph, Ont.

The centre of the demonstration was, as usual, the mid-way, and the manufacturers reaped a harvest, both in sales closed and prospects listed. Whenever there was "nothing doing" in any of the adjacent fields, the crowds thronged up and down the midway, and crowded into the tents where dealers and manufacturers made their throats hoarse expatiating upon the merits of their particular products. It was the general story when the "show" concluded Thursday evening that all representatives reported "sold out." The M. T. I. representatives discussed the value of the demonstration with several of the largest concerns' representatives at Chatham, and all were enthusiastic. The Fordson, for example, had four tractors on the grounds, and reported selling all four, and two more besides. The Cockshutt Plow Co., sold all the plows it had on the grounds, and was only sorry that it hadn't more. John Deere disposed of its entire assortment, and so went the story, all down the line.



J. Lockie Wilson, managing director of the Chatham demonstration. His Van Dyke would have stuck up at even a more acute angle, but you can see the pipe was in the road.

THURSDAY, as was remarked earlier in this account, was the big power farming day, and at 11 o'clock nearly thirty tractors started off in the big contest.

Each of the tractors was given a stretch of ground fifty feet wide, and about 700 feet in length, and no premium was placed upon speed for the only time stipulation was that each entrant must finish within three hours. Most of them finished in about one-third of this time, and accordingly the judges did not have the time element to take into consideration in making awards.

The work was done in sod, and the possible score in each case was 100. The points which could be gained were awarded according to the following schedule:

Crown	25
Straightness of furrow	15
Firmness	20
Evenness of furrow,	10
Shape of land	10
Finish	10

The judges spent several hours in examining the results of the tractors' efforts, both during the plowing and afterwards. The three men upon whom this task devolved were: James McLean, Richmond Hill; John Morgan, Niagara-on-the-Lake; and William Doherty, Eglinton.

The tractors entered for the contest lined up in the following order, several manufacturers entering more than one:

Case, Titan, Case, Monarch, Goold Shapley Muir, Goold Shapley Muir, Essex, Waterloo Boy, Schofield Automotive Tractor, Titan, Waterloo Boy, Huber, Fordson, Fordson, Hart-Parr, Avery, Cletrac, Chase, Cletrac, Gilson Dixie Ace, Happy Farmer, Sawyer-Massey, Happy Farmer, Moline, Advance-Rumely.

The furrows were uniformly straight, firm and even, and the majority of tractors finished without the necessity of making a stop. Every tractor attracted a huge audience, but the judges very wisely did not permit the crowds to throng after the iron machines, and spoil the results. One tractor, consisting of an automobile mounted on a platform or waggon, attracted a great deal of attention. Every type had its admirers, whether it was large or small, tank type or wheel type. Looks counted for practically nothing; performance counted for a great deal. It was results that the dealers and farmers were on hand to watch, and results only that counted.

ONE thing which might be drawn to the attention is this: These contests must have vastly more value if a fuel inspection were made before the work started, and every tractor carefully watched during the period of operation to see that this fuel and no other was used. Also, it would be valuable to know the quantity of fuel and oil used by each machine. This is not said in a critical or carping way, but merely to suggest that the demonstrations can become even more valuable than they are now.

When the results were announced it showed that

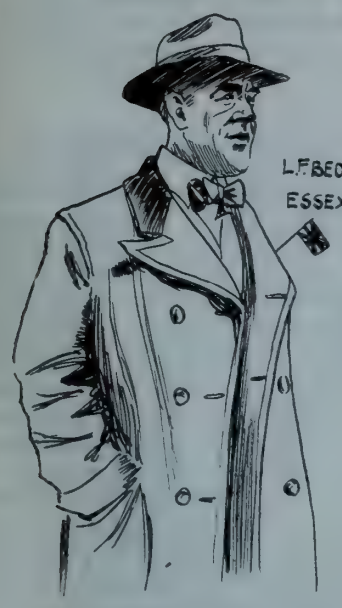
KENT COUNTY VIEWS TRACTOR DEMONSTRATION

Left column—Chase and Avery tractors at it strong; a Beaver at work; also Hart-Parr plowing; a portable well-drilling rig, getting water for the tractors; a Heider tractor.

Right side—A ledge of cedar trees as a windbreak on this farm; a Schofield Automatic Tractor of Orillia; a tobacco-drying scene near the farm; a Monarch tractor; and a Moline at work.

TRACTOR MANOEUVERS ON BELT AND BAR

Too Bad We Can't All Be As Good Looking!



the five leading tractors were bunched with seven and one-half points. The leaders stood as follows:

Case, J. B. Cooperthwaite, Agincourt, 84½.

Fordson, Bert Kennedy, Agincourt, 82½.

Gilson, Harry Page, Guelph, 81.

Cletrac, Ben Burk, Dover, 79½.

Cletrac, Dunlop, Chatham, 77.

The judges were rigorous and impartial in their findings, and as men who have been interested in horse - plowing for from a quarter to half a century in each, they did not allow any imperfections of work to escape their eagle eyes. As can be noted, they must raise good iron-plowmen up around Agincourt, Ontario, for both Cooperthwaite and Bert Kennedy, winners of first and second prizes respectively, hail from there. Next year it is likely that there will be a special class for operators like Kennedy, who, while he is a bona fide farmer, is also agent for the tractor which he drove in the contest. He will not be barred from competing, of course, but the probability is, J. Lockie Wilson says, that there will be two classes, one reserved for farmers who farm—and do nothing else.

ONE of the notable features of the Chatham "show" was the wonderful cooking placed on sale for the thousands who visited the grounds. Pies that were not *like* mother used to make, but were the *actual pies* baked by mother were sold—delicious pumpkin, apple, raisin, chocolate, ad inf. Pastries of all kinds, soft and delicious, that made you want to ask for more, real tasty "hot dogs," coffee that tasted just like coffee, and other substantial and delectable dainties were supplied by the kind women of Chatham and vicinity. We recommend this to other communities who want to hold tractor "shows"—hand over the catering to the women-folk, and advertise it as an "added attraction." It should "pull big." (We have a photograph of four members of the M. T. I. staff indulging in this wonderful home cooking, a slab of pumpkin pie in one hand of each man, a cup of coffee in his left, and other delicacies juggled precariously on his knees, but we won't print it here; it would make our readers too envious. Maybe we'll run it early next fall to entice some of you to next year's "meet.")

The managers of the demonstration acted wisely in keeping fakirs of various kinds away from the grounds. A patent medicine and medicinal oil man bought a concession, but J. Lockie Wilson didn't like his methods when he saw him in operation, and soon "chased" him after returning his cash. That's the way to handle 'em.

There was one gentle grafter that he missed, however. She was a young miss with very taking ways. She sold strips of ribbon, about four inches by an inch, with "Souvenir of the Exhibition; out for a good time" printed thereon. They set each "victim" back exactly twenty-five cents, and the ribbons must have cost at least a whole cent to turn out. She would walk up to a man, pin the ribbon to his lapel, before he realized what was happening.

"Souvenir of the exhibition?" she asked one of the advertising staff of M.T.I.

"All right, what's it for—what charity?" he replied, as he dug for his quarter.

"For me—when I get it," was her terse reply, as she walked away.

Of course, nearly everyone took it for granted that a "tag" day was in progress, and handed over their two-bit pieces fairly willingly, before they realized that it was a "personal" benefit fund. As this young woman sold between one and two thousand of these bits of ribbon, she must have made—well, figure her profits out for yourself!

NEXT year—which will be the seventh annual tractor demonstration held by the Ontario Plowmen's Association—the "show" will likely be held in Orillia, Hamilton, or Peterborough, with the odds in favor of Hamilton. The exact location will not be decided, however, until January or February. This annual feature has grown wonderfully since that month six years ago, when there was just one tractor shown.

George Scott, of Cockshutt Plow Co. This really doesn't quite do him justice!

Further development in tractor "shows" must be along two lines:

1. Contests which are *real* contests — under rigid inspection, where fuel, rating, etc., are taken into consideration.

2. Belt work exhibitions. The Ontario farmer is pretty well "sold" on the draw-bar work. Additional education and demonstration won't do any harm, but the belt-work potentialities must be driven home.

A report of the Chatham "meet" would be quite inadequate without mention of the big banquet held Wednesday evening, when 200 and more of the farmers, dealers and manufacturers were guests of the Dominion Sugar Co. A splendid "feed" was provided, with a caterer from Toronto, an orchestra from across the border, and at the conclusion the prize-winners were presented with their trophies.

AFTER the conclusion of the Chatham demonstration, J. Lockie Wilson said:

"In 1913 we held our first tractor demonstration under the auspices of the Ontario Plowmen's Association and one tractor only was in evidence at that time. The demonstration from time to time has become enlarged so that in this sixth year forty tractors were exhibited and some thirty-seven of them did demonstration work.

Never before had so many farmers congregated at a provincial plowing match. It is estimated that not less than 40,000 attended during the 3 days. Besides the tractor and walking plow contests nearly every type of machine used on Canadian farms was in evidence.

"This kind of demonstration has proved invaluable in the bringing together of manufacturers and farmers and a large number of sales were made during the show. It has been suggested that we have two classes in the next contest, one for experts and the other for bona-fide farmers, who have no connection whatever wtih any manufacturing establishment. No doubt the directors of the Ontario Plowmen's Association will arrange for a more exacting test in 1920 for the men who operate these power machines, the time per acre, fuel consumed and the quality of work will all be considered.

"Both manufacturers and farmers were well satisfied with the educational value of the demonstration, and it is the intention of the directors to make our meeting in 1920 the largest and best of all, and they are confident that the manufacturers who failed to exhibit their farm machinery at Chatham lost a splendid opportunity of getting in touch with men with whom they desire to do business."

J.B. Cooperthwaite
winner tractor plowing
Chatham

Considerable interest was created at the Chatham Plowing Demonstration by Francis Fallon, the little 8 year old London Township lad, who operated an 8-16 tractor. Naturally, with such a large audience, the youthful operator was rather nervous, but he made a very good job of his plowing.

The End of a Perfect Show!

This Syrian, smoking his water-pipe nonchalantly, was one of the sights of the demonstration.

CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
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Vol. 1. TORONTO, NOV. 5, 1919 No. 9

M.T.I. IS A HUSKY BABY

IF our readers will glance about one inch above this line, they will see that this is Vol. 1, No. 9—that is to say, the M. T. I. was born just eight months ago to-day.

But

My!

How we've grown.

March 5, 1919, the M. T. I. had somewhere about fifty or one hundred subscribers—who had been led to send in their money solely on our promises—backed by the prestige of the MacLean Publishing Co. Just to let you into a secret, it was hoped by the management that, at the end of the first year, the subscribers would total 2,000.

But, already—eight months after the first issue—this goal has been so far passed that we cannot resist the temptation to tell our readers what a big family the initial M. T. I. handful has grown into—for

Would you believe it, Mr. Dealer?

There are now exactly

2,383 in the family!

Of course, there are more *readers* each month, but that 2,383 was the number of honest-to-goodness. paid-in-advance subscribers we had October 22. There are more *readers*, because we've been printing 5,000 copies per month, and distributing these, which go to dealers WHO ARE NOT YET SUBSCRIBERS, from one end of Canada to the other. This is necessary, both ahat our advertisers may receive full value for their investment in page space, and also that motor, tractor, implement and accessory dealers may have an opportunity to look the journal over before subscribing.

Before many months, this free distribution will be reduced practically to nil. The paid-in-advance bunch will outnumber the total present distribution before the end of another year.

THE TRACTOR "SHOWS"

THE tractor demonstrations held in Ontario during October were undoubted successes, but to continue along the road of progress there should be some changes made in the future. These are:

1. The dealer and the farmer must be shown—in a graphic and practical manner—just what the tractor can do on belt work.

2. Tests—in other words, contests—to be of the utmost value must be conducted under stricter regulation, particularly as to quality and quantity of fuel used, actual time taken (including stoppages) quality of work done, and merit of result as compared with the tractor's rating.

It is not difficult to sell the average farmer on the tractor as a plowing machine—if he thinks his farm is large enough to justify the expense. Almost any good salesman could sell almost any prospect. But—

The farmer must be shown—by actual operation—how he can use the tractor 365 days in the year, to fill his silo, to cut his wood, to operate various other forms of power-connected machinery.

The dealer must similarly be shown, so that he is primed to use these arguments with his prospects.

It is very interesting to watch a score or more tractors plowing fifty or one hundred acres, but it is getting to a time when it is no more novel to the average dealer and farmer, whether in Eastern, Western, or Central Canada, than an exhibition of an automobile making sixty or seventy miles an hour.

1920 should see more exacting tractor tests—the men who operate these machines should be made to demonstrate their efficiency as to time per acre, with due allowance made for rating; they should be made to show the amount of fuel used; strict inspection of fuel should be exercised—no moth-ball stunts permitted; and, of course, the quality of the work should be considered.

HERE'S A GOOD PLAN

FOR the purpose of acquainting the people in the rural districts of Ohio with the labor-saving devices and household conveniences on the market, their costs, method of installation, etc., the management of the Farmers' Institute of the State is promoting exhibits of such goods to be held at the regular sessions throughout the winter. These include 433 two-day institutes of five sessions each and as the normal attendance is 200, it is expected that the devices will be brought before at least 500,000 people, most of whom will be keenly interested in them because of their direct bearing on their everyday work. The manufacturers and dealers will be given the opportunity of exhibiting their goods under certain rules adopted to see that all get an equal chance. The value of meeting the farmers and their wives at gatherings such as this is obvious. Canadian manufacturers of household conveniences and labor-saving devices, as well as the hardware dealers handling them, might with good profit arrange to attend the various institute meetings to be held this winter. Unquestionably some splendid business would result.

CARELESSNESS IN THE SHOP

A CASE is recalled where an engine had been overhauled and mechanically an excellent job done. The owner had been tipped off that this particular shop did good work and thus gave them the job of overhauling. He was told his car would be ready on a certain day and called for it. It was a small car and had to be cranked by hand. A service man attempted to crank the car in the presence of the owner, which job, however, could not be done, as the engine seemed locked. A consultation of service manager and mechanics said everything was right; yet the engine would not budge. Bearings had been run in properly, the mechanics stated; yet the engine seemed to be afflicted with too tight bearings. Finally, it was decided to take off the crankcase plate; this in the presence of the owner, who by this time was beginning to wonder a little.

With the removal of the crankcase came into view a main bearing wrench some 12 in. long which was left in the crankcase at the time the plate was put on, probably with the engine in an inverted position on a stand to facilitate the work. Naturally the wrench prevented the connecting rods from making their full sweep and thus locked the whole engine. It is not difficult to see why the owner of the car began wondering what else he might find stowed away in the innards of his power plant. The engine was never cranked by hand before the owner got there, which would have obviated any dissatisfaction. As it was this owner immediately formed his opinion of this shop.

WAREHOUSE
WHEN YOU READ THAT TWINE IS TO BE MUCH LOWER NEXT YEAR AND REMEMBER THAT YOU HAVE A LOT ON HAND—
BIG SLUMP
TWINE PRICE COMING
WAREHOUSE
— AND YOU GO INTO THE WAREHOUSE TO SEE JUST HOW MUCH YOU ARE CARRYING—
— AND YOU FIND THAT THE BOYS HAVE SOLD ALL OF IT FOR CORN HARVEST
OH-H-H BOY!! AIN'T IT A GR-R-R-RAND AND GLOR-R-RIOUS FEELIN'?—
TA TATA TYA

"Farm Implement News."

That Glorious Feeling!

GREAT BUSINESS IN ACCESSORIES

SALES of automobiles are being made so fast this season that the manufacturers simply cannot keep up with the orders that are pouring in upon them. Used car dealers are in the same boat. They report record sales. Hundreds of people all over the country who need cars and cannot get new ones are buying old machines or rebuilt ones until they can get new.

Every new car that is turned out and every old car that is rebuilt and put into commission again means the sale of just that many more accessories and more supplies. This offers an opportunity to the automobile accessory dealer that means real profits and nice business.

Accessory dealers all over the country are cashing in on it and once they get started and see the possibilities, it is only a question of a short time usually before they find the urgent necessity of carrying a stock that will take care of all the demands of the car owners.

Who is buying the automobiles? The answer is practically everybody. The average citizen buys a car for his own pleasure. The business man buys both cars and trucks, cars for himself and travelers, and trucks to handle his merchandise quickly.

According to figures available, there were 101,599 passenger cars in Ontario last year. Of these, 64,900 were owned in the towns, villages and by farmers out in the townships. Only 36,699 cars were owned in the cities and of these, 17,171 were owned in Toronto. There were 7,529 motor trucks in operation.

Of the automobiles in use every day, no less than 37,758 were driven by farmers and drovers. Merchants and manufacturers drove 27,144 and commercial travelers, 2,507.

The classification of cars shows that 91,866 are touring, 7,114 are runabouts, 2,758 are coupes, sedans and limousines, 49 are taxicabs and 58 are busses and ambulances. The great bulk of the cars are 25 h.p., and less, 84,108 being listed this way, while 31 are 51 h.p. and over. There are 4 steam cars and 162 electric cars. There are 18 trucks of six tons and over.

WHY A SIDE STREET?

WHY should the most important business in any town, that of selling implements and equipment to farmers, be located in an out-of-the-way place, hard to find and away from the real business of the town?

Real merchants have found it profitable to locate their business where the people are, and rents in such sections always are higher, but here one finds the most prosperous stores.

We put this question to a dealer recently that we had some trouble in locating, after directions from several town people, and his answer was that the farmers knew where he was and would come to him for what they needed. That is against all business judgment that has come from men posted on how to succeed. The sale made to the man who hunts you up means that you lose a lot of time when the customer either forgets to hunt you up, or is too busy to go the added steps to your place of business.

The retail implement business ought to be located on the main street of every town, and his place of business ought to be made as attractive as possible, with a good front of glass, a well-painted front and a cheerful entrance. We have known men who pushed the sale of paint who never used a brushful on their place of business.

Such a location would pay any merchant, for it would give him advertising enough to draw trade, the profits on which would more than make up the increase in selling expense.

Let one of the slogans of the new implement dealer be "The Main Street For Me."—*Eastern Dealer.*

This is just as applicable in Canada as it is in the Eastern States, where the *Eastern Dealer*, one of the best friends of the implement dealer in the U. S., is published. Get busy, Mr. Dealer.

ROSENHEIM TAKES A CHANCE

Pinched (With Permission) From "Timken Magazine. Sketches by CLYDE E. DARR

"RACHEL," said Max Rosenheim as he scraped the grape fruit, "I think mebbe yes I buy, now, one of them ottermobeels. Jakey Steinfelz, what has got him a sick sillender says business men don't show no class any more unless they got it their own car, which it don't cost much to run. Jakey says a feller what is a regler gonef, understand, could in one day learn to run it same as a lawn mower, and if he's careful to take it the power off when he runs down the hills he saves so much of those gasleens that in a hilly country already you have no expensiveness to think of at all. You get a good start down and the mowentum carries you up and so, like this here, now, perpechal motion. What you think of the idear?"

"Max," responded his wife, "always I say you are a good business man and a fine husband, yes. I tell you now what I wouldn't mention before, but ever since Mrs. Cohen her husband buys that second-hand ottermobeel, I get snubbed like I was not so good as her, when everybody knows she worked in a factory before she got Cohen, for four dollars a week, and even now does her own washing and ironing, which is never clean at that, and her husband beats her like a dog which I wouldn't stand from any—"

"Oi, oi, Rachel, enough you have said about Mrs. Cohen, already. I ask your opinion about this here ottermobeel and not about your neighbors which I can get any time without askin'."

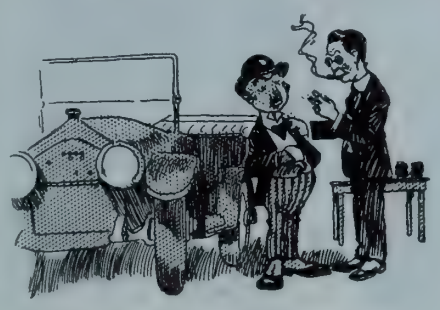
"I think it is grand idear, Max. Just think, you and me and little Abe and Moe and Louie and Rebecca, and sister Louisa and her children can get in the car and go get Uncle Aaron and his girls and go—"

"Hold on, Rachel, what it is you think I'm buying mebbe, a truck? Oder you got the idee, now, that I take it them four year profits from my business and get a Locomoterbeel or one of them Fierce Arrers whose price sound like a year's salary and expense account of a wine agent on Broadway? I aint in the munishun business, understand. What I think of buyin' is one of them, now runarounds. We gotta think about what it costs in them running expenses. Every little while you get a puncher—"

"What is it a puncher, Max?"

"I know," piped the listening Abie, "I see one in the pitcher show last night. It's one o' them fellers what wears pants made out o' goatskins and carries a revolver an—"

"Shut up, Abie! I guess we cut out them pitcher shows what don't get you nothin' but foolish idees. A puncher is when your tire gets a hole by its inside and you gotta pulverize it just like it when you gutta percha a hole in a customer's coat so he doesn't know the difference."



"Waddeye mean, four and eight"

Carried away with the idea of owning a car, Rosenheim entered a salesroom on the way down town to look at the models displayed.

"Here are two cars, Mr. Rosenheim," said the dealer, "either one of which will suit you perfectly. This is a four and here is an eight?"

"Whaddeye mean, four and eight? Is it that they go by sizes like a pair of shoes or collars, or does it mean four hundred dollars, and eight hundred dollars, mebbe?"

"Automobiles are designated usually according to the number of cylinders. We have a nice little four-cylinder here that we can let you have for nine eighty-five, f. o. b. Detroit, a six for $1,475, an eight for $2,250, and a twelve for—"

"Sno use to go any higher, understand. I aint one o' them stylish fellers what have got to have two or three bushel of them sillenders, which maybe the neighbors wouldn't know you had even one. Cut down on the sillenders and give it to me a car which will go when I pull the handle, 'sall I ask. Make to me, now, a reasonable price and I think it over."

"Automobile manufacturing has reached a stage of standardization that enables a man to secure a machine for almost any given amount of money. He simply has to pay for a certain assured quality. For instance, if the car is equipped with an electric starter—"

"Leave it off. I aint a coward, understand, but with me this electricity is nix. Rachel, she got it one of them electric impersonators what you make the coffee with and I got a shock already when Abie knock it off the table and I try to catch it. I don't care nothin' about them fancy starters jus' so I got a sure stopper so I aint a killer, or have trouble with the Irisher what is a policeman on my corner."

"You should have Timken-Detroit Axles and Timken Roller Bearings, of course, for absolute safety. Now, it is my policy to mention the difficulties. Motoring isn't all beer and skittles—"

"I never drink a drop. Believe me, beer I consider it a rank poison, understand, and as for them skittles, I never play me the game at all. Of course now a little auction pinochle aint any harm, but nothin' more."

"The Irisher what is a Policeman"

"Now, I'll admit that you are going to have some carbon trouble but—"

"Oi, oi, man, nothing you can tell me about that. I got me a good stenographer, but the way that girl uses up the carbons is a fright. I buy 'em by wholesale, and you can't tell me nothin' about carbon trouble."

"I think I can fix you up with a car all right, Mr Rosenheim. You leave it to me. I'll include every standard equipment possible to furnish at the extremely reasonable price I am going to quote you—sliding gear transmission, disc clutch, snubbers—"

"I look over dem speculations"

"All right, but never mind them snubbers. Rachel, she'll see to that, and believe me, she'll be some snubber when she sees Mrs. Cohen. Now, I gotta be goin', or them fellers down by the store will have me headed for that bankrupter's court. You come and see me Sunday morning and I think I get me this bargain, yes."

Sunday morning the automobile dealer was at Mr. Rosenheim's very early, with specifications and a rock-bottom price.

"'Sall off," said Rosenheim. "No ottermobeel for me," and he looked at the specifications and figures with scant interest. "Rachel is cryin' out her eyes, and the children are makin' a fuss like it was a lickin' they were going to get, but I take not the car; I have my reasons."

"What's the matter? You were very eager to own a car the other day."

"Well, I tell you. I aint one of them, now, heeroes. If in this war bizness I comes under the descriptions, and a graft they bring upon me, I fights like a lion robbed of its hay, understand. But foolish risks get you nothin' but slow music what you don't hear.

"I guess I take it a chance"

"I think mebbe I buy it an ottermobile"

A horse aint so showy, mebbe, but he don't blow up or try to run through a street car. Already I drive a horse every day to the store and back. Friday I go to sleep as I ride home and the feller who sell me the horse wake me up at his house ten miles out in the country. My Gott! I say, suppose I had me that ottermobeel and go to sleep—into the river I fall!"

"I'll leave these folders here for you to look over, anyway, Mr. Rosenheim, you may change your mind. Think it over."

Wednesday morning Rosenheim telephoned. "Hello, hello, is dis der ottermobeel feller, yes? Dis is Rosenheim—No, No, Rosen-heim, propriedor of der Scotch Voolen Mills Emporium by Main Street—You know I look at an ottermobeel and vouldn't take it because I might go to sleep and get me derownded. Vell, dey tell me dat derownding is an easy death. My vife she tells all der neighbors ve was going to get an ottermobeel, and little Abie he tells all his playmates, and ven I back owit—oi, oi, such a time I have mit dem. I look ober dem pitchers and speculations vich you leave and I ask—Get off der vire you louse, I'm talkin' bizness—shut up yourself—say, are you lisnen, you ottermobeel feller? Vell I look dem over and I vish you tell me honest, is der actuals in dis car full-floaters?"

"Full-floating, you mean. Yes, the axles of this make are of the full-floating type."

"Vell den, I guess I take it a chance."

Western Implement Dealers Claim

Margin on Repairs Should be Increased

BY A SASKATCHEWAN DEALER

Herewith is the fourth, and last, of the series of "Implement Dealers' Problems," each written by a dealer who has studied the particular question he treats. Next month there will be an article which will summarize the facts given in the four articles, introduce a mass of new material, and show conclusively the merits of the case. It will be worth reading by every man who handles agricultural implements.

THE margins allowed by wholesalers on repairs to agricultural implements is the vexing subject of discussion everywhere implements are sold, and in no part of Canada is this a more vital topic than in Saskatchewan. When the margin allowed on repairs runs as low as seven or eight per cent., and it costs a dealer 22 per cent. to 25 per cent. to handle repairs—well, what's he going to do about it?

The handling of repairs and giving of adequate service is an expensive proposition—to the dealer. This cost must be cut down—that is, the wholesaler and the farmer must each bear some of the cost which now rests upon the shoulders of the dealer, if the present conditions are to be rectified.

The wholesaler has a good argument against further increases—namely, that too many dealers will not carry an adequate stock of repair parts, will not stock them systematically and efficiently, and will not give the farmer the kind of service which he should get.

AT the meeting held last May in Regina, this question received considerable attention when the wholesalers and retailers got together. With regard to repair discounts the dealers showed how retail associations in the United States were asking similar discounts and receiving them and pointed out that the repair business, as now existing, constituted an actual loss. From the evidence produced, it appeared that the farmer was getting his repairs at a very reasonable rate, although he evidently does not think so. The retail dealers claimed that they were actually losing money on every transaction in connection with the sale of a repair part.

A discussion took place on the necessity for better dealers. One wholesaler stated that the retail trade would do well to improve their system of stocking repairs and their display and arrangement of machines. The main contention of the dealers was that the companies themselves were to blame, as men were getting contracts who were possibly all right as agents, but they were not business men. In their anxiety for representation the companies appointed agents who were not making adequate profit—who did not, in cases, know how to make it.

The wholesalers replied that it was very difficult to get the class of men they required in many instances, and also that men got into the trade too easily, men being appointed with no business experience.

A Saskatchewan dealer—not the one who wrote last month's article—writes as follows regarding his problems on repair margins:

"I have proven very conclusively that in a year's business it costs me over 22 per cent. to handle repairs without having made any allowance for carrying over stock on hand until the next season, and when that cost is considered there is nothing left out of 25 per cent. and then some.

"Our Saskatchewan Government has so arranged our programme for us that the dealer is between the devil and the deep sea. The wholesalers list a fair (?) selling price of each part with the Government, which, in most cases, is so ridiculously low that almost every dealer in the province breaks the law every business day of life by adding to the price enough to keep him on the safe side, otherwise he would have to go out of business at an early date.

"The wholesaler tells us that he cannot allow us any larger margins. Of course, he has to make a sufficient profit to satisfy the home office. He also tells us that the price listed with the Government is as high as the farmer should pay, and some of our grain grower friends (who never pay their bills, the men who do pay never kick), are on the lookout to catch the hated middleman, if he tries to break even on the repair game. The whole aggregation are bent on keeping the dealer humble.

Two Case men looking at cup which they won at Wheatland Plowing Match. We don't know why they look so glum; perhaps because the cup is empty.

"IN all my experience in the repair end of the game I have found that it was a splendid thing for supplying hard work and lots of worry for the man who tried to do his work well and carry a satisfactory stock.

"Of course, the reputation for carrying a good stock of repairs brings a certain amount of business, but even that is being offset by the fact that there are dozens of curbstone agents—you cannot call them dealers, because they have nothing at stake and carry no repairs at all, who make a business of butting in and catching a few sales at cut prices and informing the buyer that the dealer in the next town has always got a good stock of repairs.

"This kind of business obtains all over this country, and as the wholesalers are looking for outlets for their goods, most of them demanding an exclusive contract, they are encouraging that class of agent and lowering the standard of the retail implement trade.

"The great majority of the implement dealers are handling implements as a side line, and were it not for that fact most of the dealers would have to go out of business in a very short time."

How M. T. I. Helped This Tractor Sale

"DEAR Sir:—I might say for your information that a cut in MOTOR, TRACTOR AND IMPLEMENT TRADE JOURNAL was of great value to the writer in closing a sale north of Clan William last Saturday evening. This seems encouraging, for both yourself and the writer, and we will take great pleasure in co-operating with you in boosting your journal, and as well will appreciate the interest you are taking in our trade."

This is one of the most interesting, and pleasing letters, among a grist-full which reached the M. T. I. editor's office during the past month. It is from Joseph Neilly, manager of the Canadian Branch of the Huber Manufacturing Co., Brandon, and is written under date of October 21. The "cut" to which he refers appeared on page 34 of the October issue, and when we saw it in proof form we remarked that it was one of the best samples of good printing and photographic work we had ever seen. We certainly are pleased that it has proved to be so helpful, and we have received more information about the same sale which we pass along to our readers. Our correspondent in Brandon says:

"The sale Mr. Neilly made was due to the Huber cut which appeared in our October issue, and was made for SPOT CASH—and he was back eating his supper less than two hours after starting out on the trip, which was one of considerable distance.

"I was rather interested to notice that when Mr. Neilly opened his grip he pulled out a couple of copies of M. T. I. which he had in it, with his firm's own stationery, order books, etc. He says he carries his copy of M. T. I. with him all the time."

TWO OTHERS

THERE'S no room this issue for more than a couple of other communications. Fred M. Clow, dealer in farm implements, milking machines, stable fittings and automobiles, Kingston, Ont., writes:

"I have been reading your magazine for some time and find it very helpful. One thing that has impressed me is the plea for an 'Implement Dealers' Association,' and why not? The manufacturers are united; and the farmers are now united, and I believe it would be most helpful to all concerned, and it may help to pave the way to put the farm implement business on a par with every other respectable business, and do away with the 'gypsy' class of dealer."

We're strong for that, Mr. Clow. We would like other dealers to write us their views. We'll have more from Mr. Clow later.

W J. Allin, Chatham, Ont., says: "I read M. T. I. from cover to cover, ads. and all. It's a great inspiration. Keep up the good work."

New Cole Models

IN announcing its new all-season cars, the Cole Motor Car Company, Indianapolis, presents a series of automobiles which afford distinctly new advantages in enclosed car design. There are six models in the line of Cole Aero-Eight all-season cars—the Sportosine, the Sportsedan, Sportcoupe, the Toursedan, the Tourosine and the Towncar.

The obvious newness of these six cars is revealed in the flush panel construction employed throughout. This eliminates the overhanging of the superstructure, adds strength to the design of the cars, eliminates permanently many of the inherent limitations of enclosed car use and introduces a new beauty of line that is instantly appreciated.

Automatic window regulators are used throughout, and so cleverly are the glass panels installed that they may be dropped down into the lower body panels and the cars thrown almost completely open for summer driving. The upholstery is in mohair velvet and in every case is of a color to harmonize with the exterior finish of the car.

The new Cole Aero-Eight Sportsedan is a swagger creation. It is a four-door, four-passenger model, in which the rear quarter sections are solid and have octagonal windows. It is distinctly a sport car and the adjustable glass partition between the front and rear compartments is a novel addition. It has a seating capacity of six.

The Aero-Eight Sportcoupe is entirely new in its conception. There is space for four passengers in it. In design it strikes an entirely new note.

The Tourosine is essentially a chauffeur-driven car. The partition between the front and rear compartments insures tonneau privacy, although it may be lowered completely out of view into the back of the front seat. The Toursedan is a spacious family sedan—counterpart of the Tourosine with the exception of the central glass partition.

Both the Tourosine and the Toursedan embody the new Cole vacuum storm proof windshield. So designed that there is always an unobstructed vision space on a level with the driver's eyes, this windshield is so constructed as to create a suction of air from within the car, assuring perfect ventilation regardless of weather conditions.

The Towncar is custom-made throughout and reflects the personal taste of the owner. It is one of the most disincive exponens of aerotype design.

The new Cole Aero-Eight all-season cars are furnished either in American flag blue or Aerogray with upholstery to match. Their new construction makes them practicable for touring as well.

The Cole Canadian distributors:

The Southard Motor Sales, Calgary, Alberta; Republic Motor Car Co. of Can., Ltd., 518 Yonge St., Toronto, Ont.; Robson Motor Corp., Guelph, Ont.; Cole Motor Sales Company, 131 Portage Ave., Winnipeg, Man., Thomas Plimley, Victoria, B.C.; J. A. Erskine, 1719 Scarth St., Regina, Sask.; Kerosene Equipment Co., Ltd., 142 Bleury Ave., Montreal, Que.; The Great Eastern Garage, St. John, N.B.

Cole Aero-Eight Sportsedan.

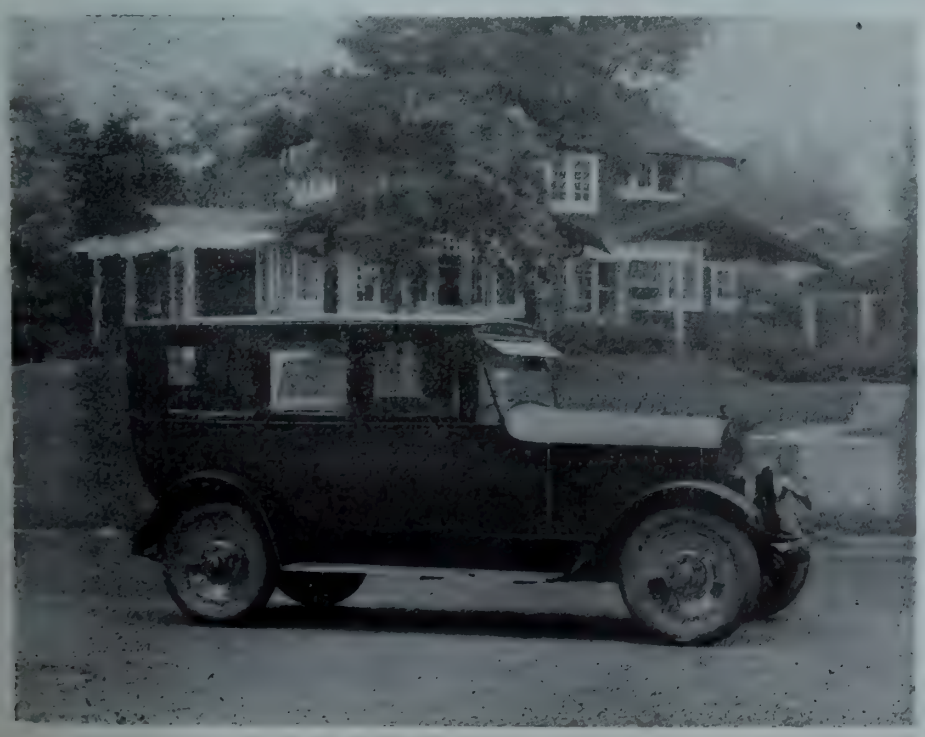
New Haynes Sedan

ELEGANCE, style and distinction of body, with reliable, sturdy mechanism are prime requisites of the serviceable motor car of to-day. Fastidious, discriminating patrons who seek atmosphere as well as power and dependability, are those who drive the new series Haynes sedan—the beautiful masterpiece of car-character, comfort and elegance.

New Series Haynes Sedan.

The new series Haynes sedan is upholstered with genuine mohair velvet laid in plaited style. The rear seat is soft and loungelike. The wide, comfortable, upholstered auxiliary seats are readily raised or lowered. A braided robe cord hangs across the back of the front seat; the ends are made secure by two decorative silver fittings. Glasses are raised and lowered by regulators wrought in dull silver. Silver decorated dome and quarter lamps illuminate the interior with a soft and mellow light. The silver fittings bear the quaint and famous Mount Vernon pattern. Vanity and smoking cases are complete and are made of solid mohogany. There is a large, handsome pocket in each of the four doors. Another plush-lined compartment is found between the auxiliary seat recesses. Each door may be locked.

The classic Haynes blue exterior finish further beautifies the new sedan which is made in two styles. Model 45 has six cylinders and sells for $3,350 at the factory, with wooden wheels as standard equipment. Model 46 has twelve cylinders and is equipped with five wire wheels. The twelve-cylinder sedan sells for $4,000 at Kokomo, Indiana.



Cole Aero-Eight Tourosine.

Two Kinds of Dealers

THE story is H. G. Weaver's. He has spent a large part of his time this year calling on dealers and farmers as a representative of the Hyatt Roller Bearing Co. The story is the first that appeared in "The Tractor Tract," a new Hyatt publication of which C. M. Eason is editor, and which is to appear, Mr. Eason says, "from time to time when some of us get a real inspirational story and must relate it or bust." Here is the story:

It was a small Western town. Most of the stores were frame buildings and not too attractive. There was the railroad station, the red brick court house and the proverbial Main street.

There were six implement dealers in this town, for it was the nucleus of a rich agricultural section. I visited all those dealers. Two of them I will not soon forget.

At the first place a farmer was waiting to see the boss, who could be heard in the next room loudly arguing with a subordinate who it was alleged had misplaced a very important invoice.

I engaged the farmer in conversation. He told me he was using a tractor which he had purchased from this particular dealer. He said that it was a wonderful machine, but that a certain part thereon had always given trouble—that even before he bought, the dealer had agreed to furnish him gratis with an improved device that would give satisfaction. Said he had made several trips to town just to get it, but it happened that the supply was always exhausted and that the dealer didn't seem very much concerned now that the tractor was fully paid for.

And just then the dealer made his appearance and bluntly asked the farmer what he wanted there again. And after the farmer had explained his mission the dealer gave vents to a volley of oaths, lamenting the fact that farmers were so hard to please. Then in the tones of a martyr he called to the repair stock man and ordered him in the name of all that was good and holy to give the farmer what he wanted so that in the future the atmosphere might not be polluted with his whinings.

Another implement store. Another farmer. Another dealer. Another complaint.

In this instance the dealer was talking to the farmer at the time of my arrival. Whether the complaint was just or unjust I cannot say. I do not care. I arrived just in time to hear the dealer say:

"Why sure, Mr. Cochran, we'll make that

good. If you had let us know as soon as it happened we would have sent the part to you last week. Here, John, leave that work, go for a moment and fix up Mr. Cochran. He seems to have it on us this time so bill him 'no charge!'" And in a few minutes I saw Mr. Cochran go his way, his placid countenance plainly indicating that peace and satisfaction that passeth all understanding.

And I talked to Mr. Dealer No. 2 and I asked him about business prospects, about crop conditions, about the intelligence of farmers as a class, and the answers were optimistic and refreshing. I began to conclude that the tractor business was a good business and that the farmer was reasonably human and fair.

This cut shows the new Arrol-Johnston, sent out from England for the use of the Prince of Wales during his present tour.

And then I questioned him concerning his service policy and he surprised me by saying that he was very "tight" on free service and replacements—that his repair department was a profitable division of his business and I told him that what I had just overheard had led me to form the opposite impression. And this is what he said to me:

"Well, it's a sort of a rule with us that when we see that we have just got to do a thing we make out like we are glad to do it!"

And why not be pleasant about giving a man that to which he is entitled? It didn't cost a nickel more to have him go away smiling!

Good for you, Mr. Dealer No 2. I have an idea that we could all profit by your homely philosophy—a philosophy that would turn many a liability into an asset—a philosophy born of direct contact with human nature!

It's what I would call an 18-carat traxiom* and that's why Corona and I are passing it along to the next fellow.

Maybe this dealer didn't want to talk to me—lots of them don't— but he knew he had to do it, so he was pleasant about it, and I believe we both profited by the interview.

Maybe a man doesn't want to pay his bills but he knows he has got to do it; so does it gladly and gets a reward in the form of a substantial credit.

Perhaps the office boy doesn't like to get to work a half-hour earlier than the rest of the bunch, but if he can convince the boss that he is glad to do it he'll not be an office boy very long.

*Traxiom—A twentieth century proverb deserving of the approbation of those worthy Brothers of the New and Modern Order of Power Farming.

Crow-Elkhart Six

THE Crow-Elkhart Motor Corporation, Elkhart, Indiana, at the Fall exhibit showed a new six-cylinder touring car. In design this new touring model embodies the latest ideas of motor construction. The slim lines of the hood and body extend without break from radiator to rear. The driver's compartment is V-shaped with a corresponding V-type windshield. The doors are square and wide open; the running board is conveniently low; the fenders are full crown and moulded.

The car is finished with pleated leather upholstering, thick-napped all-wool carpeting, polished wood instrument board and bright nickel fittings. It is equipped with a six-cylinder multi-powered motor. Recent tests have proved that it will frequently run from 20 to 23 miles on a single gallon of gasoline. The mechanical units of the new Six are standard parts of new value. The Borg and Beck clutch, Zenith carburetor, Exide batteries, Parrish and Bingham frame, Thermoid-Hardy friction lead, and universal joint are standard equipment on the new Six.

The motor is a six cylinder, cast en bloc; L-head, 4-cycle; detachable cylinder head; bore 3⅛ in., stroke 5 in., three point suspension, and gear drive throughout. The brakes are double-acting service and emergency, contracting and expanding. The steering and control is a large one-piece corrugated wheel, left hand driven; worm and sector adjustable gear; ball and socket gear shaft, and foot accelerator.

The electrical equipment is Dyneto 2-unit, 6-volt, starting and lighting system. The starting motor is equipped with Bendix drive applied to fly-wheel, and operated by push button on toe board. Complete set of six lights, including dimmers, and tail-lamp on light and instrument board. The weight of the new Six is 2,470 pounds.

The New Crow-Elkhart Six

tive feed gear pumps. The carburetor is a new type Rayfield; air adjustment on dash; hot air supply; gasoline gauge on tank. Steering gear is worm and wheel type, fully adjustable; self lubricating bearings; horn button in centre of wheel; spark and throttle levers above wheel. The lighting and starting system is a two-unit Bijur; powerful starter engaged by a simple touch of foot; octagon shaped head lights and double bulb with extra reflector on dimmer; all wire enclosed in metal conduits with fused junction boxes for inspection. The car is equipped with a tailored top and envelope of Drednaut waterproof material. Large plate glass window in rear; gypsy curtains; stored in compartment in back of front seat, rain-proof shield; 60-mile speedometer and motor driven horn.

The Canadian distributers are: Canada Motor Car Co., Toronto.

Garage Men Win

THE erection of free air standards and gasoline tanks on the public sidewalks has been a source of dispute between the garage men of Toronto, on the one hand, and the Works Committee of the city council on the other. The dispute arose over the action of the council in ordering that gasoline pumps and air stands should be removed from the street curbings. A deputation of garage men put up the plea that in taking such action the council was legislating in favor of a monopoly, whose gasoline stations and pumps were back from the street. At the first sitting no decision was arrived at.

The matter was brought up again October 24, when a deputation of some thirty garage owners, marshalled by Secretary W. C. Miller, of the Retail Merchants' Association, presented their appeal against the council's order. This time the council decided in favor of permitting the sale of gasoline from approved pumps on the public streets.

New Velie Six

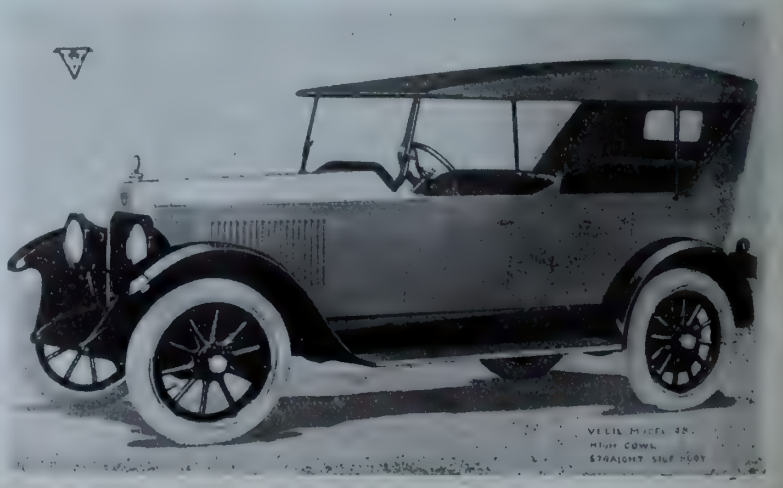
"WE have special pride in making this new car available to the automobile public. It is the product of many more months of engineering and designing than it has ever been possible to give a car before"; thus the Velie Motors Corporation, Moline, Ill., announce their new Velie Six.

In design, the body is new and striking. It is straight-line type blending into a high-beveled cowl with tapering hood and high radiator. The body is long with broad doors and deep-tilted roomy seats. Running boards are nickel bound and covered with linoleum. The upholstering is of soft plaited leather.

In the Velie is a new motor having an internally heated vaporizer which readily converts any grade of fuel into a hot, dry, powerful gas. It runs smoothly and solidly without vibration or noise at any speed.

Other features of the Velie Six are: Improved Timken axles and bearings; Borg and Beck clutch, Bijur starting and lighting system and new V tire carrier. The standard colors are Velie blue and Velie green, both of which are rich dark shades.

The cylinders are cast en bloc with a 3¼-inch bore, 4½-inch stroke, removable head. The cooling system is, a large honeycomb radiator of new shape: centrifugal water pump with double connections and 18-inch belt-driven fan. Oil is continually filtered by combined pressure and splash systems through hollow crank shaft: pressure is supplied by posi-



New Velie Six

MIXING POLITICS AND PLOWS

How the Genial Archie McCoig, M.P., Does It

By T. MUNROE FRASER

ARCHIE B. McCOIG, M. P., spends part of his time selling tractors and other agricultural implements, and the remainder in Parliament, looking after the business of the people of Kent County. He does both jobs with the utmost eff ciency. He is faithful in his attendance in Parliament, where he is an authority on agricultural and many other matters. He can make a very good speech; and although he is described in the Parliament Guide as being "Scotch and a Presbyterian," he has "a way with him," which indicates that there is an Irish strain in his blood. He is an uncompromising, but independent Liberal, but there is certainly no more popular member with those on both sides of the House.

He has, however, one failing which cannot commend him to a newspaperman. He does not like to talk about himself. The people of West Kent, where "Archie" has been auctioneering, and electioneering, lambasting Tories one day and selling them tractors the next, may doubt the statement that he is shy and retiring; but I know that whenever I reached the point where I thought I was going to get him to say something about himself, he invariably warned: "Don't put that down, though." However, I am not going to pay any attention to that. Living around the House of Commons, you cannot help knowing something about the members and how they are esteemed. Take it from me, Archie is all to the good there.

What the M. T. I. wished to learn from him was some of the wisdom he had acquired in the course of nearly a quarter of a century selling implements; how he found plows and politics mixed; what the future of the business was in South Western Ontario, and so forth. He handles the I. H. C. line exclusively, and naturally believes they are the best. As a seller of implements, his firm name and style is "A. B. McCo'g." His auctioneerng busness s conducted as "McCoig and Harrington."

HIS political partnership is composed of himself and all the Grits in the county, together with as many Tories as he can convert to the error of their ways from time to time. He admits that there are not so many of them as he would like to see.

But to get down to tractors.

"The main thing in building up a tractor business," he says, "is to take an interest in every machine after it is sold. Lots of tractors lie idle because of some little mishap or lack of adjustment which could be easily remedied by a man who knew how. I make a point of looking after a machine after it is sold, and keep a competent man regularly employed for that sole purpose. I think the agent should look after the machine he sells, for a reasonable time, until the purchaser gets on to the hang of it himself; and after that he should have a man available for the purpose; the farmer should pay for this work.

"There is one very necessary thing which I think should be governed by law, and I believe is in some of the Western Provinces; that is, that the firm selling tractors should be obliged to keep a sufficient supply of repair parts for the same. The number of new tractors constantly coming on the market is legion; and some of them seem to disappear and leave the farmer in the lurch. For this reason the wise farmer will buy only that tractor or other implement—and there are numbers of different established makes—for which he can get repairs at short notice. He will save himself money and much time by buying only from responsible and permanently established firms. The 'phone and rural mail service is so good now that even if repairs are not obtainable within fifty or one hundred miles, it is a matter of only a day or so before they can be secured from such firms.

"I can say that those tractors which have been properly looked after by those who sell .them have largely increased their business in South-Western Ontario. The general type used is the 8-16 and 10-20 h. p. The latter is sufficiently powerful to operate a reasonable sized separator, ensilage box, feed grinders and corn shellers, and also draw three, ten or twelve inch plows in any condition of soil. It can be obtained at a price which the average farmer in Ontario can well afford to pay.

"I would repeat that the main thing to secure better service is to deal only with reputable firms, and to have legislation passed compelling any firm seeking a market in Canada to carry and supply all necessary parts. Otherwise you have a situation such as confronts the man who buys an English or foreign automobile. Service is the big thing.

"I think the time is coming when tractors will be as common as automobiles. Every farmer with one hundred acres or more will have one.

"Tractors sell on a cash basis, like automobiles, though they may be bought by paying part cash and the balance at seven per cent. interest. But the practice is to advance the price to the buyer who does not pay all cash, the advance being in the neighborhood of $75.00. I think this is an injustice to the farmer who is trying to increase production and is willing to branch out as quickly as his means will permit. If he pays interest on the amount owing, he should not have to pay more than the cash price. This difference between cash and credit price is fixed in the price list, but personally my practice is to take the notes I secure to the bank and discount them, and give the purchaser the benefit of the cash price. I believe manufacturers are blocking the trade by the prevailing method of doing business.

"The banks in Canada might do well to make a practice of giving advances to farmers for the special purpose of buying tractors, retaining a lien on the implement as well as the personal security."

Archie B. McCoig, M.P., in Ottawa; I.H.C. in Chatham.

TO the question as to how the automobile and tractor businesses mix, Mr. McCoig replied that he thought the two lines were essentially different. You must have a special warehouse for automobiles, something more "fancy" than is required for tractors and other implements. The tractor business is exclusively with farmers. It depends, of course, a good deal on the individuality of the dealer.

"As for politics and implements, I find they mix first rate. My experience is that if you use your customers right politics do not make a particle of difference. I have been in business for 25 years and in politics for nearly as long, beginning with the Chatham city council in the years 1900 to 1904. I was in the Ontario Legislature for one Parliament, and have been in the House of Commons since 1908. I think I sell about as much to men of one party as to those of the other, and have found the farmers of West Kent very liberal minded in this respect, at least. I do not recall ever losing a sale on account of politics, and I doubt if I have made any through that influence.

"I have taken all my canvassers off the road, and spend what they cost me in looking after the machines after I have sold them. This is good salesmanship, and good advertising as well.

"You know, I am a farmer myself, and I think I have some idea of what the farmer wants. I was born and partly raised on the farm; and have taken a good deal of interest in the raising of good stock, including Percheron horses, Shorthorn cattle, and Tamworth and Berkshire pigs.

"AUCTIONEERING has been a large part of our business, and the close touch it has given me with many farmers has been a help to the implement business, naturally. Our implement business this year will be the largest we have ever had, being pretty well up in the thousands; and will include the sale of from 35 to 40 tractor outfits. I should say the average outfit of implements for a good-sized farm in Ontario would cost around $4,000.

"In politics I have always been a low tariff man. I supported reciprocity and was one of the twelve Liberals returned from Ontario in 1911. I think I may claim that I got the tariff removed from tractor ditchers for drainage purposes. I advocated the measure as strongly as I was able and it was finally adopted by the Borden Government. I also introduced a resolution for the removal of the duty from tractors commonly used for farm purposes, which was finally adopted by the Government during the agitation for greater production."

LATER JENKINS PAYS RANSOM

Washington, Ont. 27,—William O. Jenkins, American counsular agent, and E-B dealer, who was robbed and kidnapped by bandits near Pueblo, Mexico, has been released on payment of the ransom of $150,000, *according to a message from the American Embassy at Mexico City, received at the State Department to-day.*

$150,000 Asked For Tractor Dealer's Life

EVERY effort is being made by the Emerson-Brantingham Company to secure the release of Wm. O. Jenkins of Pueblo, Mexico. Mr. Jenkins was kidnapped by a group of bandits, Sunday night, October 19, and is being held in the mountains for $150,000 ransom.

The information was telegraphed to the E-B Company by J. J. Marshall, export manager, who was in Pueblo at the time. Immediately upon receipt of the telegram, A. T. Jackson, vice-president of the company, telegraphed U. S. Senators McCormick and Sherman and Congressman Chas. E. Fuller, requesting their aid and also that of the State Department in providing ransom and securing Mr. Jenkins' release.

The following telegram was received from Senator McCormick: "State Department informs me that Carranza Government will leave no stone unturned to obtain relief of Mr. Jenkins. In case payment of ransom is necessary, it will be paid.". Congressman Fuller also sent a message stating that they had received all possible assurance from the Carranza Government that every assistance would be given Mr. Jenkins.

Mr. Jenkins is one of the largest E-B dealers in Mexico, and in addition to his activities as an implement dealer he owns and operates a cotton mill, a hosiery mill, a foundry, and a plantation of several thousand acres of land at Pueblo. He knows several of the groups of bandits personally because he has been obliged to pay them large sums of money for the privilege of operating his plantation peaceably.

He is a native of Tennessee but has lived in Mexico for nearly 20 years. In addition to his business there, he is American Consular Agent at Pueblo.

This is only one of several cases where Americans have been kidnapped and held for ransom by Mexican bandits. It is hoped that Mr. Jenkins will be fortunate enough to come out of his experience unharmed.

Educate Your Customers to Advise You Regarding Live Prospects

By E. H. SCOTT

DURING the course of a recent trip through Central Manitoba and Eastern Saskatchewan, as a representative of MOTOR, TRACTOR AND IMPLEMENT JOURNAL, I made a personal call on several implement dealers. But one object was kept in view; to discover live methods of securing and holding business. To every dealer the following questions were put:

"How do you secure prospects?"

"How do you close prospects?"

"Do you believe in the straight canvass system?"

"What are the prospects for the sale of implements this fall?"

Perhaps the most surprising feature of this investigation was the number of men who were found to be content to sit down quietly in their offices and wait for business to come to them. They had the goods, they said, and they simply sold them to any who came after them. If a farmer needed a cultivator, he simply came to town and got it—and that's all there was to it. This class of dealer knew nothing about aggressive methods of advertising goods and selling them. They made no efforts to study the needs of their community, and to advise the farmer of what implements were being most successfully used in light or heavy soil. They did not press home the value of the packer as a guard against drought, nor strive to show the economy of the tractor under certain conditions. In other words they were content to stagnate, and wonder why their competitor got the business.

It is a treat to strike the real aggressive fellow. When you mentioned enterprise in business he recognized that you had called him by his middle name. Usually you found the marks of the live wire the moment you entered his premises, with an attractive display of implements, tractors and automobiles; walls covered with highly colored lithographs that are supplied by most manufacturers; hand racks filled with booklets and literature; an office clean and businesslike even in an off season; and the boss himself freshly shaven, clear eyed and enthusisatic.

Just such a man was J. J. Irwin, Massey-Harris Co. dealer at Virden. This is his first year in business, and he is on the job every minute of his waking hours. While the stagnant fellows tell you that it does not pay to go out into the country because it costs too much to keep a man to watch the premises while you are away, Mr. Irwin jumps into his car and whisks out to the farms and back at every opportunity, covering a territory 50 miles in area.

"How does he secure prospects?"

In answer to this question he reached into his desk and handed over a little pocket note book which he keeps for this very purpose. This book, which is presented by an implement firm, is designed for keeping the names of prospects in compact and handy form. Across the double top of its pages are printed in separate columns the names of every article sold to the farmer by the implement dealer. All that is necessary therefore is to put down the name of the prospect, and make a check opposite the piece of machinery that he is in the market for. There is only one thing the matter with this little book, and that is that no date is designated on which the prospects should be looked up. Mr. Irwin explained that, say, in the case of binder prospects he got out after them from four to five weeks before the beginning of harvest, and the same applied to all classes of machinery.

"But how are the names secured for this book?"

ACCORDING to Mr. Irwin they are secured in many ways. During the winter months when the farmer comes in to spend a friendly hour in his office he ascertains with the aid of a little tact what he has in view for the coming season in the line of work, and what implements he will need. It is not hard to draw out a farmer on his pet hobby. He has observed the operations of his neighbors, and he constantly has new plans in view. After these conversations Mr. Irwin makes a few notes in his little book.

Again, when farmers come to make purchases of one article, they are accustomed to drop a hint of something else they are in need of, and if this is not jotted down it is apt to slip the memory. Other prospects are secured by the straight canvass method in which the agent has plenty of scope to sow the seed of future sales by telling of the merits of his goods. But one of the livest methods of securing prospects is *by fearlessly asking any farmers with whom he does business if he knows of any of his neighbors who are in need of machinery.* In no instance does this give offence, and it is a constant source of names for the little book. There seems to be an inherent desire in the generous heart of the average farmer to help out the agent with whom he does business, and when he is asked this question the probabilities are that he will take a mental note of his neighbors' requirements in future and tell of them without invitation. It is possible that he expects to secure a little bit better treatment for himself, and so he does. And so this agent at Virden has a large part of the community keeping him tipped off to likely customers. It is right here that the genial mixer cashes in while his competitor hibernates in his office with his feet on top of the safe.

BUT after securing the name of his prospect. Mr. Irwin does not stop there, nor leave anything to chance. He begins to pave the way to a sale by sending the prospect at the proper time some attractive literature and folders describing the good points of what he wished him to buy. If he has not such literature he requests the manufacturer to send the necessary booklets, and the latter is only too glad to assist. Take the case of a man, for instance, who has mentioned that he will be in the market for a cream separator in the very near future. How much more easily he will be handled if he receives one of those classy folders in colors written by the brainiest advertising experts telling why this especial separator is the finest in the world!

There is a lesson for implement salesmen in this picture which shows the method of displaying a tractor with the plows hooked up to it, which very materially increases the prospect of making a combined sale, whereas if they were separate, as is usually the case, the tractor alone might be disposed of. The display is made at the offices of W. H. Blyth & Co., at Esterhazy.

There are tons of this excellent literature prepared and sent out each year to agents, but the great bulk of it is stacked up in an out of the way place in the office or thrown away.

It is in closing the prospect that the fine art of salesmanship is shown. Mr. Irwin's plan is to go right out and see his man at the opportune time. If his prospect is in the fields he goes out to him armed with selling facts and arguments. He points out to him the success that other farmers in the vicinity have had with the machine in question. He promises to set up the machine on the farm, and see that it works properly. He agrees to give such terms as his man can conveniently handle. In other words he strives by every effort to make a sale, and he usually succeeds because he is first on the ground, and that goes a very considerable way with a farmer who, given all things more or less equal, is reluctant to create ill feeling by going to the other fellow.

Mr. Irwin has the agency for the Minneapolis Tractor, and with a view to creating interest in this machine for fall plowing he put on a little tractor demonstration of his own. Through the medium of advertisements in the newspapers and by posters distributed throughout the country, he invited the farmers to be present at this demonstration. There is surely no way in which he can better advertise his machine than by this display of confidence in its operation.

Discussing the system of canvassing in the country this agent says it pays if it is only to make friends. There are times that he stumbles on a sale that handsomely repays him for his efforts, as in the case of a visit to a farm this summer, when he learned that the neighbors were seriously thinking of buying a tractor. He lost no time in paying this neighbor a visit, and had little difficulty in closing the sale.

Mr. Irwin has had a good run on seeders and cultivators this year, as well as a fair demand for mowers, rakes and binders.

ACCORDING to Mr. Junek of Junek and Co., Esterhazy, Sask., an implement agent has the paradoxical experience of "Doing most of his business when nothing is doing." According to this agent it is the spirit of friendship that draws visitors to the warehouse in winter and summer that is ultimately responsible for sales.

"When a man just drifts in and wants nothing, that is usually the time you get a prospect," he says.

As in the case of the Virden agent this firm keeps a record of all prospective purchasers, and sends salesmen into the country to see them if sales are not made in the meantime.

"The implement game is just like sowing wheat," according to Mr. Junek. "You must plant the seeds of a sale and wait until they develop. When the time comes to make a sale it depends upon the man how you handle him, but it is our experience that the average farmer will not be rushed. The best way to do is to ease him along, and wait for him, then when the moment of decision comes close quickly. The harder you rush a farmer the less you get from him because he gets the idea that you are after his money instead of trying to give him satisfaction.

"I think the first qualification of an implement agent," said Mr. Junek, "is to be able to select the line of goods needed in his particular territory. To me this is just as important as selling. An agent should study the needs of the farmer; find out what machinery has been most successful for the particular soil of that section, and keep a good stock that will sell."

Last year there was only a fair crop, and sales have not been up to the mark, but Mr. Junek sold a number of tractors this fall, and more binders than last year. He also expects a big business in lumber, as there is considerable building in prospect and he recently placed an order for $10,000 worth of lumber for his independent yard.

This firm also sells automobiles, and it has recently completed on one of the main corners of Esterhazy a combined garage and implement warehouse measuring 50 x 94 feet.

IT was in the office of Messrs. Kidd and Clements at Rocanville that the best use was being made of literature sent out by manufacturers. The various circulars and folders were so arranged in long racks close to the entrance, and so inviting that there was always the temptation to take one or several in passing. This firm is a branch of the agency established at Wapella, and is operated by W. Birdsell. Mr. Birdsell stated that fifteen tractors had been sold at Wapella this year by his firm. He, too, keeps a book of prospects which are secured by much the same methods as heretofore described.

"It pays me," he said, "to keep my fires going full blast all winter and just sit around in order to pick up prospects; however, I am one of those who do not think it pays a man to go on the road. In a town of this size there is not enough in it for two men, and the one in charge must stay on the job in order to meet customers when they come in."

Mr. Birdsell had a heavy run on drills and cultivators this spring, disposing of 16, and with the coming of the rain expects a good business in binders and in all fall goods, for there is every prospect of a bumper crop.

The POOR "BACKSLIDING" FARMER

By B. J. PAULSON

WELL, well—who ever would have "thunk" it! It's certain that gran'dad never would have. He marveled when he was able to hang the old cradle-scythe on a high rafter in the barn loft and forget all about it in the pride and enthusiasm of owning a reaper. He marveled still more when, in his declining years, he was able to run the old reaper into the machine shed and displace it with a "self-binder." But in his wildest dream he could not picture the poor "backsliding" farmer to-day. To him, the most approved methods of farming now practised by up-to-date farmers would be marvelous beyond believing.

Yes sir, gran'dad thought the limit of farm progress had been reached when he saw the first "self-binder" cutting grain and tying it into bundles with twine. He considered this machine nothing short of a miracle. What would he say, then, if he could see to-day some of the harvester-threshers, which are quite extensively used in the Western districts of Canada and the United States, that not only cut the grain but also thresh, clean and bag it? Do you think he'd believe you if you told him that the smallest of these machines harvests and threshes at the rate of 15 to 20 acres a day while the large "combines" harvest, thresh and bag from 75 to 125 acres a day? No sir!—he'd laugh raucously and tell you to go home and sleep it off.

AND if you told him about the new self-stocker equipped binders that cut the grain, bind it into sheaves, and then stook the bundles, doing the work just as expertly as any man could do it—do you think he'd believe that? Perhaps he would, if he was a very credulous gentleman and placed great faith in your veracity—but at that, we doubt it very much.

Or if you came upon the old gentleman while he was throwing manure off a waggon with a fork and told him that there are now manure spreaders that will automatically unload the manure, first thoroughly pulverizing it, spreading it to a width of eight, or ten feet

The farmer of to-day turns his horses into the pasture to browse luxuriously while he hauls his crops to town in a motor truck equipped with a dump body.

from a four-foot box, the whole thing being done in the space of a few minutes—do you think that he'd swallow that yarn? Maybe he would—but the chances are that, instead, he'd slap you on the back and laugh heartily, at the same time telling you that "you're immense"!—or words to that effect.

And just suppose you told him that you were farming a thousand acres of land without horses, mules or oxen and only one or two farm hands to help you; that a tractor did all the hard work, including plowing, harrowing, seeding, harvesting and threshing—wouldn't the old gentleman have a hilarious time though contemplating such a wild "impossibility?" From that time on he'd have you catalogued as a teller of fairy tales.

Being a serious-minded and persistent person, suppose you went a step further and informed your esteemed great grandparent that, after the harvest is done and the grain is threshed, the modern farmer of to-day turns his horses into the pasture to browse luxuriously while he hauls his crops to the elevator in a motor truck equipped with a dump body so that it is but the work of a moment to unload a load of grain—What would your father's father say to that? He'd certainly begin to doubt your sanity!

AND then, if you continued in the same strain and suggested that many of our well-to-do progressive farmers have now thrown out the kerosene lamp and illuminate the house, barn and various outbuildings with electricity—simply push a button—and that, instead of patronizing the old rain barrel just outside the kitchen door or the cistern pump inside, this farmer secures his water by turning a faucet either in the kitchen or the bath-room—don't you think this would be just about the limit of the old gentleman's endurance? He'd probably clout you over the top of the head with a club in an attempt to restore your sanity—and mourn the fact that any of his descendants should have come to this sad pass!

And yet, the poor "backsliding" farmer of to-day is coming to all these things. He may not have all of

Grandad marvelled when he was able to hang the old cradle-scythe on a high rafter and forget all about it in the pride of owning a reaper.

them now but he'll have most of them eventually—and more, too. For we have not yet enumerated such things as automatic milking machines, power washmachines for the women folks, power driven cream separators and churns, power wood saws, corn shellers, feed grinders—and power "what not!" This is essentially a power age and because it is a power age, all farm equipment must keep pace with the rapid, forward stride of farm power. Power is symbolic of progress so it is apparent that the poor, "backsliding" farmer of to-day is slipping straight into the luxurious, ample lap of Progress. He is buying electric lighting plants, hot-air furnaces, water, and sewage systems for his home and is handling the farm work with tractors, self-lightgang plows, binders, individual threshers, motor trucks—and all the rest.

SO why should we pity the "backsliding" farmer of to-day and to-morrow? Let us, instead, help him along—grease the tracks, as it were, to make his forward progress easy. That's where the local dealer comes in. Are you on the job? Have you anticipated the many things that the well-to-do farmer in your community can add to his farm and home equipment to make life more worth-while? Machines to save labor and drudgery at the same time increasing farm production and lowering operating costs and other machines and devices to add to the comforts of the home?

Help a good thing along. You will be surprised how it will help you along, too.

MUST PAY OUTRIGHT FOR DEMONSTRATION TRACTORS

A NEW policy has been put into force in the Western Ontario territory by J. A. McConvry, manager of the London, Ont., I. H. C. office, in regard to the loaning of tractors to agents and dealers in his territory.

If a dealer wants a tractor for *exhibition* purposes, and will guarantee to keep it in his showroom, the I. H. C. will carry this tractor on the books of the London office.

But—

If a dealer wants a tractor for *demonstration* purposes, to run all over the country-side giving exhibitions to his prospects, then the dealer must *buy outright.*

"There will be no more tractors carried on the books of the London office, while they are cavorting around Middlesex, Elgin and adjacent counties, getting all worn out," Mr. McConvry told the editor of M. T. I. recently. "It is not business-like, and we don't want to find at the end of the season that what we have listed on our books as brand new tractors are really second-hand machines.

WHAT IS A GARAGE MAN?

What is a garage man? What does he have to do to be one?

After discussing this question from every angle more than a score of garage proprietors, managers and members of the Garage Men's Section of the Automobile Association of the Cleveland Chamber of Commerce decided on this answer: "A garage man, to be entitled to the classification, must have been in that business at least one year with a garage having a capacity of four cars, or he must have a garage of that capacity with at least $1,000 invested, in which case he need not have been in business for any stated period."

NO SPOTLIGHTS IN ONTARIO

Use of spotlights on motor cars is now forbidden in Canada. The new Motor Vehicle Act of Ontario provides "it shall be unlawful to carry on any motor vehicle operated on a highway any light which revolves upon a pivot or other device so that rays of such light may be projected in different directions."

If you came upon the old gentleman while he was throwing manure off a wagon with a fork and told him that there are now manure spreaders that will automatically unload the manure, first thoroughly pulverizing it, spreading to a width of eight or ten feet from a four-foot box—do you think he'd swallow the yarn?

IS THIS CANADA'S FINEST GARAGE?

15% Ramp is Interesting Feature

"CANADA'S newest and finest garage," is the claim made by the new garage recently completed in Ottawa by the Ottawa Car Manufacturing Co., Limited. In a handsome announcement issued by the company, the merits of the new place are described:

"To meet the increasing demand for a high class fireproof garage in Ottawa, the capital of Canada, where automobiles of every description may be safely and economically housed and repaired, the Ottawa Car Manufacturing Company, Limited, has erected this mammoth garage and equipped it second to none on the American continent," says the foreword. The letterpress which follows is profusely illustrated with cuts showing the various departments and equipment.

"The Ottawa Car Garage is the largest and best equipped public garage in Canada. It is situated in the heart of the city of Ottawa and has a frontage and entrances on Albert street of 136 feet, and runs through the entire block to Slater street. The location is ideal for motorists and is only a few blocks from the Parliament Buildings and the Chateau Laurier, Canada's premier hotel. The garage consists of a basement and first and second floors, connected by concrete ramps. The entire building is constructed of reinforced concrete and steel, is absolutely fire-proof, and is equipped with the latest fire preventive appliances for protection of our patrons' cars. The garage covers a floor space of 60,000 square feet, the majority of it being reserved for the storage of cars. Three hundred automobiles can easily be accommodated.

"In addition to being a fire-proof building, particular attention has been taken to provide the maximum of air and light, and in this and many other respects the building stands unique as a model of garage perfection.

"The garage, land and buildings are owned and operated by the Ottawa Car Manufacturing Company, Limited.

PATRONS are then urged to take advantage of the unusual facilities offered by this garage—safety, care, economy, and service. The system of checking owner's cars in and out is emphasized. Mention is made of the individual locker service supplied to all patrons. Other features mentioned are the day and night service in washing and cleaning cars; to the special service car "held ready day and night to rush aid to a breakdown or other emergency or for towing purposes"; to the commodious waiting rooms; to the telephone provided for patrons' use; to the fact that the prompt and courteous service of the employees is based on a system in which tips are not permitted.

Further a Registration Bureau service has been opened to bring together patrons and reliable chauffeurs. Portable fire extinguishers are provided at frequent intervals for the safety of individual cars. A convenient air service is always available. A thousand gallons of gasoline and three grades of lubricating oils are carried in stock. A complete line of accessories and parts are available day and night. All popular makes of tires are stocked. Tire repairs are under the supervision of experts. Electric car batteries are charged by expert electricians and cars are delivered.

"The finest types of electrically driven engine, bench and forming lathes are installed here, together with the most improved milling and planing machines.

DROP hammers, forging machines, bar cutters, special tools, etc., are included in the blacksmith shop. Drop forging and hardening are also undertaken. Frames are built to order. In fact there is no type of automobile or truck work for which this shop is not completely equipped both in men and machinery.

Ramps eliminate the use of elevators. The grade is fifteen per cent. They are not so steep but what the average car (from actual observation) can climb on second gear. Nor are they so steep that the average car would have any difficulty in descending with inefficient brakes. They permit the owner to personally drive his car in and out of the garage in a few seconds. seconds.

The officers of this progressive company are:—Messrs. T. Ahearn, president, Warren Y. Soper, vice-president; James S. Fraser, secretary-treasurer; W. M. Arnold, general manager; and H. G. Mason, manager auto department.

He Gets the Hundred!

TO win the prize of $100, offered by manager Loughlin of the Ottawa district of the International Harvester Co. of Canada, it was necessary for the man who "copped the century note" to sell fifteen tractors. The dealer whose picture you see above is the man who won out.

"Go out and sell tractors as fast as you can. There's a hundred bucks in it for the man who disposes of the most in my territory." Such was Mr. Loughlin's proposition, and A. T. Allison, of Inkerman, Ont.,

A. T. Allison, Inkerman, Ont.

wound up the tractor season a few days ago with fifteen to his credit—thirteen of them were 8-16's and the balance were 10-20's.

When the editor of M. T. I. met Mr. Allison at the tractor demonstration in Ottawa, the winner was planning a holiday, after his strenuous sixteen weeks' exertions. For, it was not until the latter part of June that he jumped into the game. The editor asked Mr. Allison how he had "put it across," and the latter gave vent to some of his views:

"First of all, tractor selling, in Ontario at any rate, is work—real hard work. There are still certain prejudices against the tractor, and doubts as to the merit of its performance. The men who bought from me broke down the barriers of their own prejudice, in a great many cases, and I am going to see that they get at least a year's free service from me, principally on that account.

"THEY didn't know what kind of a tractor to buy, but they took my advice—and took the chance. They are the men in every community who are always prepared to back their own judgment, even on a new proposition. Now, they are being watched by all the farmers for thirty miles around. It will pay me—as well as them—to give them a year's free service. I'm certain that it will.

"How do I give this service? Well, whenever I am in the neighborhood of a farmer to whom I have sold a tractor—and I circulate around the country-side pretty freely and often—I make it a point to go to his farm and see how it is behaving. This gives me an opportunity to make any small adjustments required, answer any questions, and make any suggestions for further operation. It is also a good time to get a line on prospects in that neighborhood.

"If one of the tractor owners gets into trouble, I get out to him as quickly as possible and set him right. A dealer should realize how important a farmer's time is at certain seasons of the year. And, I don't charge for this service."

Next year Mr. Allison expects to sell I. H. C. tractors—probably a good many more, though he was too modest to make any prognostication. He intends to have help—to employ a competent mechanic, who will look after certain deliveries and give the necessary service.

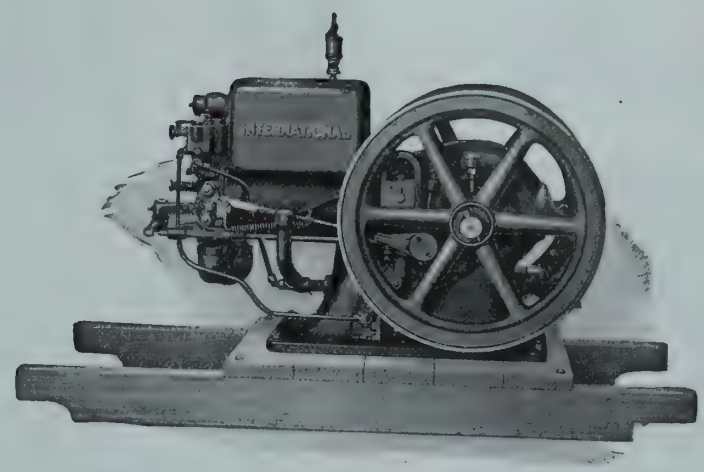
The new garage recently opened by the Ottawa Car Manufacturing Co., Ltd., is one of the largest in the country. They lay claim to be "Canada's newest and finest garage." They have a huge floor space and the mechanical equipment is up-to-date in every detail.

BELOW are two machines which have made themselves known and popular wherever there is grain and a need for power. They are as practical utilities as any on any farm, and they are constantly adding to the profit-totals of farmer and agent.

They co-operate with each other on the farm and therefore dovetail into each other as a selling unit full of possibilities for any agent. INTERNATIONAL ENGINES will help you sell VESSOT FEED GRINDERS and grinders will help you sell engines. Take this successful team under your management and we will help you place on your territory grinders and engines safeguarded by the names Vessot and International. Ask the International Blockman about this in due season.

VESSOT FEED GRINDERS

THERE is one part of a feed grinder that is more important than all others and that is the grinding plates. A pair of VESSOT plates will grind 1000 to 2000 bushels according to quality of grain and the fineness to which it is ground. Look for the letters "S. V." stamped on every VESSOT plate. It is a guarantee of quality. VESSOT GRINDERS are made in 9 different sizes, filling the requirements of any customer.



INTERNATIONAL KEROSENE ENGINES

THE Farm demand for small engines is growing rapidly. Engine power appeals to every farmer. We offer the agent reliable INTERNATIONAL kerosene engines to sell at prices any man can afford. Sizes are 1½, 3 and 6 h.p.. The INTERNATIONAL is a high-grade engine, has magneto ignition for both starting and running, uses cheap fuel, is simple in design---good, dependable farm power that any farmer or his wife can quickly learn to handle and that furnishes steady power economically.

INTERNATIONAL HARVESTER COMPANY

OF CANADA LTD.

WESTERN BRANCHES — BRANDON, WINNIPEG, MAN., CALGARY, EDMONTON, LETHBRIDGE, ALTA. ESTEVAN, N. BATTLEFORD, REGINA, SASKATOON, YORKTON, SASK.

EASTERN BRANCHES — HAMILTON, LONDON, OTTAWA, ONT., MONTREAL, QUEBEC, QUE., ST JOHN, N. B.

SHOP NOTES FOR THE GARAGE MAN

Stiles Fender Straightener—Tire Gauge Not Easily Lost—Removing Grease

Conducted by SCOTT T. DUTHIE

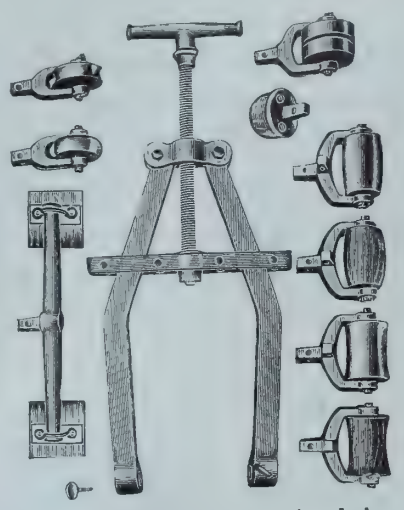
STILES FENDER STRAIGHTENER

FREQUENTLY one sees the fenders of a motor car dented as a result of a miscalculation on the part of the driver. In general the method for straightening the dented fender is to use a mallet and a block of wood and considerable muscular energy. Either the fender must be straightened by the method just described or else a new fender must be fitted to restore the appearance of the car. The old method of hammer and tongs recently has been improved upon with the marketing of the new device shown. Briefly described the machine is comprised of a master yoke, two arms drop forged and controlled by a long screw with a handle. They are fastened together with a rolling slide which permits the arms to spread as regulated by the screw. In the open end of each arm is a cavity which will accommodate the various attachments.

This machine, which is made by the Stiles-Gilliland Mfg. Co., St. Louis, Mo., is simple and straightens bent fenders without removing the fenders

Stiles Fender Straightener marks a new era in automobile repair work. Straightens, bends and takes out dents without the fender being removed or heated and without pounding.

from the car. The first illustration of the series shows a dented fender. It should be understood that while straightening fenders is the sole object of this device, there are limits to its application. For example, a fender badly crushed and ruined beyond recognition cannot be repaired with this device. The straightening bar is applied to the upper side of the fender with the peen-ended attachment underneath. By screwing in on the handle the two arms are brought closer together. This forces the bent portion out. As soon as the curvature of the fender reaches a position where the extended arms of the crossbar are too far apart, the screw is released slightly and the blocks



The complete fender straightening device.

moved closer together, as in the second illustration.

The blocks, of course, take out the biggest part of the bump but do not put the fender back into its original shape. This is accomplished by attaching the rollers to the clamp as shown. A variety of rollers are supplied with the arms so all forms of fender curvatures may be met. The rollers are applied by slipping them into the ends of the arms a convex roller on the outside and a concave roller on the inside. The two arms then are brought close together and rollers are worked over the surface of the dented portion. As the fender gradually straightens under the pressure of the rollers the pressure can be increased and the bumps then will be ironed out.

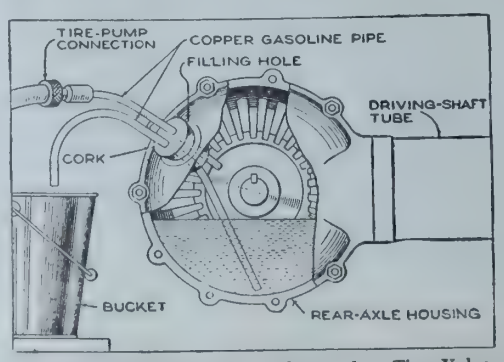
The price complete is $30, F.O.B. St Louis.

Stiles fender straightener marks a new era in automobile repair work. Straightens, bends and takes out dents without the fender being removed or heated and without pounding. Will not injure the enamel.

Can be operated by one man, and an ordinary job completed in half an hour—adjustable for all kinds and parts of fenders. Will remove dents from bodies, doors, panels, hoods, and other metal surfaces. It rolls out the kinks and restores the original form.

REMOVING GREASE

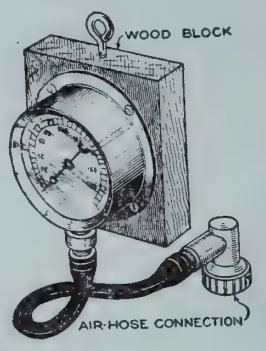
THE necessity of removing and replenishing the grease in the rear axles of cars, where no drain is provided, caused a garage mechanic to devise and construct the following simple arrangement, which facilitates removal and permits flushing out of the housing thoroughly with kerosene.



A Cork, Fitted with Two Tubes and a Tire Valve, Provides a Ready Means of Draining the Rear-Axle Housing.

TIRE GAUGE NOT SOON LOST

AT an automobile service station on a highway leading out of a large Eastern town, the manager was constantly losing his small tire-pressure gauges, which were appropriated by motorists who stopped to inflate tires. To make it difficult for a tourist to slip the gauge into his pocket after using it, the owner equipped his air compressor with a large model, which was too bulky to be taken away. He chose a large-diameter pressure gauge, of the type used on boilers or air compressors, and screwed it to a flat block which was furnished with a screw eye, so that it could be hung from a hook on the compressor. The tire-valve connection was made by attaching a piece of rubber hose and coupling, of the type used for the filling hose.



KEEP SPARK PLUG CLEAN

Grease or dirt on the top or upper part of the spark-plug porcelains will often cause the motor to miss when under heavy load because part or all of the current passes through the grease instead of jumping across at the points.

FORD HEADLIGHT SWITCH

A Ford headlight switch which gives a slight shock when the lights are turned off, may be cured of the habit by interchanging the wires attached to it on the front of the dash.

COTTER PIN HOLES

In overhauling Ford motors and any other motors where the main bearing bolts are tightened from the head end, the work may be done more quickly if the heads of the bolts are marked on the line with the cotter-pin holes. In tightening these bolts one can tell how the holes are pointing without having to hunt for the hole itself.

IN MOTOR WORLD

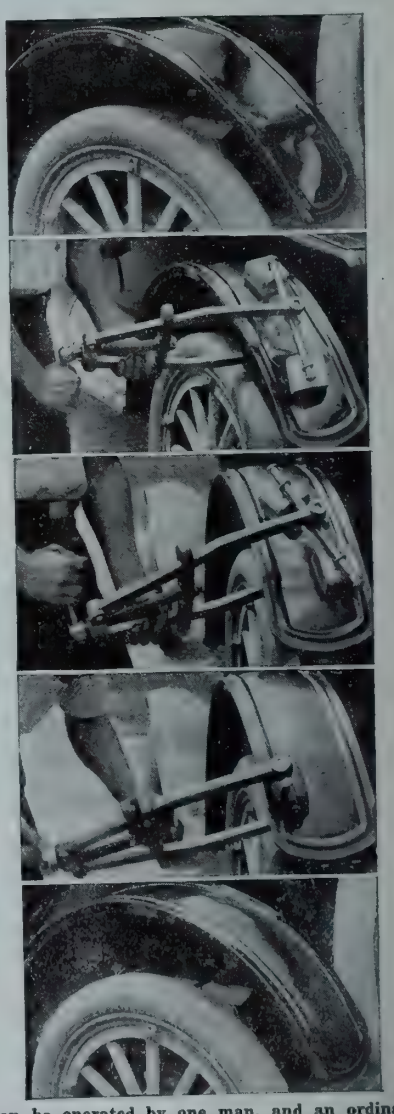
Q.—A Buick Light Six, Model 55, equipped with Marvel carburetor will not operate on slow speed unless primer is open half way. I cannot get the needle valve below 2½ turns. It will run on high speed but kicks back into the carburetor and burns up unnecessary gasoline. Have had the float shellaced and carburetor cleaned, also manifold inspected for leaks, but without results.—A. Mackie, Mac's Garage, Port Arthur, Ont.

A.—Your troubles may not be in the carburetor but can be in valves or ignition. In so-called carburetor troubles, more than half the cases can be traced to other things, but because it is possible to adjust the carburetor this is taken to be the source of trouble.

Our suggestion is to go over both valves and ignition, taking up any lost motion in connections, cleaning everything and getting these parts in good shape. It will then be possible to adjust the carburetor.

Turn the gasoline needle valve to the right as far as it will go. Set the air adjustment so the end of the adjusting screw is even with the point of the rachet spring above it. Open the gasoline needle valve one full turn to the left. Now start the engine and let it run until the water in the radiator is good and warm. Retard the spark and then turn the gasoline valve to the right, until the engine idles.

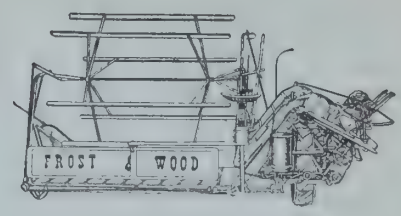
Now advance the spark and slowly turn the air adjusting screw to the left



Can be operated by one man, and an ordinary job completed in half an hour—adjustable for all kinds and parts of fenders. Will remove dents from bodies, doors, panels, hoods, and other metal surfaces. It rolls out the kinks and restores the original form.

until the engine begins to slow down. Then turn to the right until the engine runs well. Advance the spark and open the throttle suddenly. If it misses of fires back, turn the gasoline needle valve a little to the left, leaving the air adjustment where it is. If you cannot get results this way probably the float level is too low for good results.

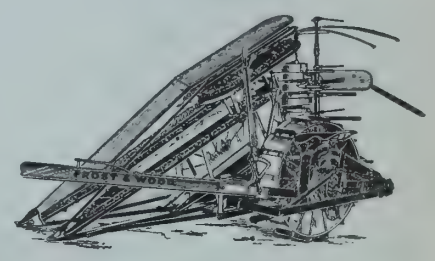
A DEALER'S PLATFORM



If you sat down and figured out exhaustively the features you really wanted in the Implement Line you were to handle—wouldn't it stack up like this:

Prestige

Meaning goods with an established reputation, made in Canada, from a lifetime of experience of actual Canadian farm conditions and requirements. No theories. No experiments. PROVEN GOODS.

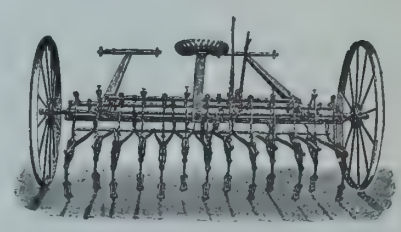


Value-to-Farmer

Meaning implements designed to suit the Canadian farmer. With the strength and design that only expert Canadian experience and workmanship can embody. Giving years of hard, useful Canadian service.

Completeness

Meaning a line that supplies practically every field requirement of the Canadian farmer. Every implement perfect. All made, guaranteed and backed by one big, resourceful Canadian organization.



Dealer Service

Meaning a line that has been consistently and thoroughly advertised for years in Canadian publications—backed by superior catalogue and folder service, by prompt repair delivery, and by the principle of the SQUARE DEAL first, last and all the time.

That's the COCKSHUTT-FROST & WOOD LINE

Hundreds of Successful Dealers will Endorse Every Word of This

Send for our latest Dealer Proposition

Cockshutt Plow Co., Ltd.

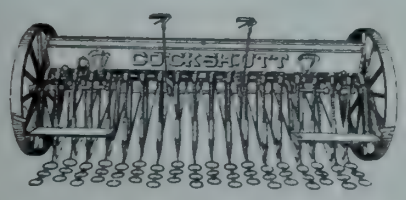
Brantford, Winnipeg, Regina, Calgary, Saskatoon, Edmonton

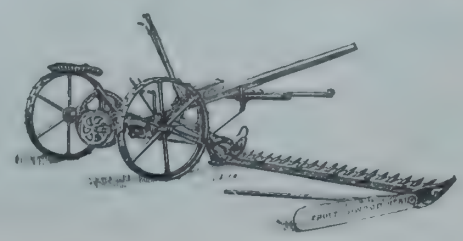
Sold in Eastern Ontario, Quebec and Maritime Provinces by

The Frost & Wood Co.

Limited

Montreal, SMITH'S FALLS, St. John.





BATTERY TERMINAL SULPHATION

MUCH battery trouble is caused by the terminals not fitting into the battery bus bar snugly. This causes the sulphate deposits to collect in the battery terminal bearing area and make a very poor connection, offering considerable resistance to charging. In fact, a corroded battery terminal will cut down the charging rate about a third.

Usually this trouble is brought about by the terminal lock screw bottoming in its thread socket, making it impossible to pull the terminal up into the bus bar tight. To remedy this some shops merely put an extra washer under the lock screw, but this is only a makeshift, as when the car owner happens to visit another garage they invariably will throw away the washer as unnecessary, not knowing that it was placed there for a definite purpose. The real way to make a satisfactory repair in this case is to install a shorter screw or else cut off and shorten the one already in the terminal. This is a sure way of ridding the owner of his battery terminal trouble.

When installing a battery terminal it should be scraped free of all sulphate deposits both on the wire and bus bar connections. The application of a little vaseline on the connector bearing will reduce materially the possibility of sulphation and keep the resistance to charging offered by this connection down to a minimum.

A NOVEL GASOLINE MOTOR-ASSEMBLY STAND

THE accompanying illustration shows a novel gasoline motor stand developed at Knightstown, Indiana.

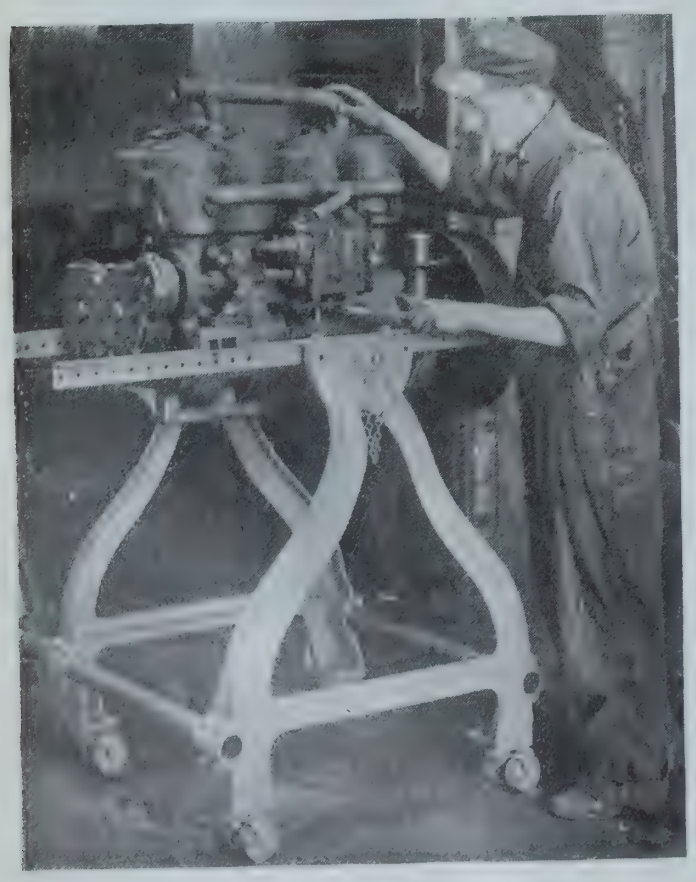
It is held that this motor stand will handle any motor from that in the smallest passenger car to the largest truck and tractor motor. It is instantly adjustable to any width from 0 to 30 in., and in height from 32¼ in. to 39¾ in. The motor is placed in the stand in the natural way—the same way that it is placed in the car.

The side rails of the stand compare to the frame or sub-frame of the car. After the motor has been clamped in the stand it can be turned to any desired position and locked there by means of a small steel pin. This pin is attached to the stand by a chain and cannot be lost. The motor can be completely inverted so the lower crank-case may be readily removed, and the bearings exposed in such position as to be very easy to get at, and bearings may be scraped in and rods lined up with ease.

It is maintained that in motor assembly this stand meets every requirement, with no obstructions to the mechanic. All parts of the motor may be reached with the minimum amount of waste effort. In progressive or individual assembly, after the crank-case has been fastened to the stand, it is not changed until the motor is ready to be removed. It is portable and is particularly adapted to speed up the work and keep all men busy.

A Ford attachment was designed to facilitate the assembly and repair of the Ford motor, the peculiar construction of which makes it impossible to handle this work in the same manner as the ordinary type of motor. This attachment securely clamps the cylinder block to the motor stand in such position that the Ford crank-case, transmission, crankshaft, flywheel, magneto, connecting rods, pistons and cylinder head can be removed without rearranging the cylinder block in the stand. This makes it possible to tear down a Ford motor and leave only the cylinder block in the stand, as is shown in the lower illustration.

These stands are regularly equipped with double wheel castors which enable the stand to be moved from place to place with ease. In motor assembly the crank-case may be clamped to the stand and all parts of the engine assembled in the motor room. The stand, with the completed motor, may then be taken to the chassis department, where the motor is removed and placed in the chassis, and the stand is ready for another motor. In repair the motor can be removed from the car and be immediately placed in the stand, after which it can be removed to the motor room for repairs, and when ready to install again the motor stand conveys it back without removing the motor from the stand.



View of the stand in use.

UP-TO-DATE CAR WASHING

AN automobile laundry on Euclid Avenue, Cleveland, has introduced a brand new way of washing cars.

While you go to the theatre, your car gets a bath and grooming.

But if you're only stopping for a lunch or something at the fountain, you can still have the toilet of your pet motor vehicle performed without delay or inconvenience to yourself.

It's all in the system of the new Euclid Auto Wash, which takes your dirty bus at the door and in four progressive operations turns it out at the other end of the building in 24 minutes shining like a new dollar.

The progressive plan of washing automobiles introduced here is likely to become a standard in all big auto grooming establishments.

The system is this:

Four concrete runways, built on an incline, are each the width of an automobile. Between the tracks for the wheels is a pit or trough by which washers can get under the cars.

As the car is rolled on to a runway, it is stopped between two platforms running its length. A man on each of these platforms attacks the top with air hose and brushes. Underneath the car, water is turned into two spray pipes running the car's length, and this loosens the accumulation of mud and grease.

Six minutes or less is the first stand, and the car moves forward one length and on each side another set of workmen attack the wheels and chassis. Soap suds are drawn from a patented mixing contrivance. Hot and cold water are on tap and a kerosene spray to cut the grease.

Another car length brings the machine to the body washers, who from either side attack body and fenders.

The last six minute trick on the runway is in the hands of the chamois and vacuum men, who dust cushions and upholstery and inside the top and dry the body with the chamois.

If a polish is desired this comes extra, and is done off the runway.

The work is timed like an elevator schedule—six minutes is the maximum allowed for each operation.

Six hundred to eight hundred cars a day is the estimated capacity of the institution.

Each track is 100 feet long. Ten powerful lights on each side of either track above and a row of lights along the floor illuminate the work. But the entire building during the day is light as outdoors because of the great expanse of glass in the roof.

Looking After Car Finish

By J. B. BERRY, Regina

J. B. Berry, Regina, a recently acquired subscriber of M. T. I. sends in this interesting letter, which we pass on to our other readers.

THE beautiful finish on a car is the pride of the owner when it is new, and many owners have tried in vain to keep that finish in good shape, but slowly and surely the appearance fades and soon the car body goes dull and flat, dead and disappointing, the top is dirty and faded, and the cushions and trimmings not fit to sit on without a rug, and all this possibly after three months' wear. It should not be, say owners, and I quite endorse such statement, but ignorance and neglect are the sole producers.

Take the varnished body finish and what is it? Simply flax oil boiled with gums, and if this is to be kept good, then like must be treated with like.

There are hundreds of polishes procurable and waxes, but they are mostly failures, simply because the manufacturer aims to produce effect and not renovation, and his chief ingredient is spirit, that gives quick effect and also quick degeneration, and oxidation.

Varnish being oil and gum is very elastic, and anything put on to it to create unnatural expansion or contraction quickly creates ruin. Again remember a car runs by gasoline power and this gas produces a filthy grease from the fumes that settles on the body and means quick ruin.

Water Won't Clean Cars

Remember water will not clean the car body nor trimmings because grease and water will not mix, and yet any fool who can hold up a hose thinks he can wash and clean a car, a gross mistake; it requires a man of knowledge and experience to clean it just as it requires experience to clean a suit of clothes.

Thousands of cars are run into a garage, in a dirty, hot condition, and immediately an "expert" comes along and shoots a sixty horse power hose over the body, hot hood, radiator and breast of the car, cold water shot onto a hot surface composed of an elastic finish, and this covered with dust, which means the water and the dust grinds the polish off in quick time, and the cold water causes the varnish to contract immediately and quick ruin is the result after a few operations.

Possibly the owner then is persuaded to use some polish which in ninety-nine cases in a hundred will finish the depreciation. They will give results for the time being but the last stage of the game is worse than the first.

Water is useless to clean and renovate a car, the body of a car requires to be chemically cleaned with proper ingredients, the knowledge of which requires years of practical research and experience.

Gasoline Hurts Varnish

Again remember that gasoline, although it will clean the grease off your car, the wheels and gear, is the deadliest enemy to varnish, paint and your rubber tires, yet it is the one remedy used by ignorant and reckless car washers.

The car requires washing, the hood requires renovating, and the cushions, etc., demand care, but the body, hood and cushions really require more scientific cleaning than washing and if this is attended to by really experienced men your car body would last years instead of weeks. Here is an illustration: a well-finished buggy or piece of furniture will retain its finish for years, the buggy with simple washing, and why? Because it is not propelled by gasoline power, nor does it come in contact with gas fumes.

A well-placed man can afford to buy a carriage and pair, or a business man requires a team for his business, and the first call on the propelling power is, that the team must be watered, fed, well housed and groomed morning, noon and night, and with proper care will live, last and be profitable for over twenty years, while the same man will dispose of these and procure a car, start it out to run just by the purchase of gas, runs it probably ten times the distance daily he would run a team, and after the day's work, day after day, week after week, he shuts it down each night and leaves it standing out any old place to face wind, rain, snow, and next morning cranks her up and expects good results, and finally she refuses to budge and is just called a d—d old b—, and given a round of curses and she gets this sort of treatment because she is a mechanical machine instead of a team.

Some Polishes are Good

All car owners can get ten years of usefulness out of any brand of car with the same care they have to give a team, and do most of the caring themselves, and by spending a little money with responsible skilled mechanics and cleaners (and let me say the big garage is not the place to get either the one or the other, in most cases), for car renovation is a real business in itself, actually and not theoretically.

There are polishes that are good, and renovators that really know their business, and by placing the car with the latter and finding the former and using it, you are going to get value out of your car, doing justice to your car, and save both temper and vast outlay of money. It is well to remember that cars often require a ten cent repair, through ignorance and carelessness, but it often costs ten dollars to get at it. How many men will spend five dollars on a pair of boots, and during the wearing period they will spend double the amount on 15 cent shoe shines to keep them nice and make them last out; the same with a suit of clothes, costing thirty dollars, and yet these same intelligent men will pay from $700 to $2,500 for a car and never spend on its renovation what they would spend on either the boots or the suit, consequently they get just what they are sowing. Be wise and study your car's renovation question, it is really worth while.

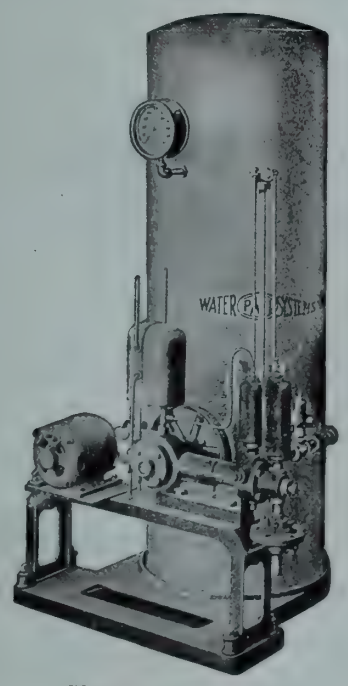
Northern Electric

POWER and LIGHT

The complete line of Electric Farm Plants and Accessories.

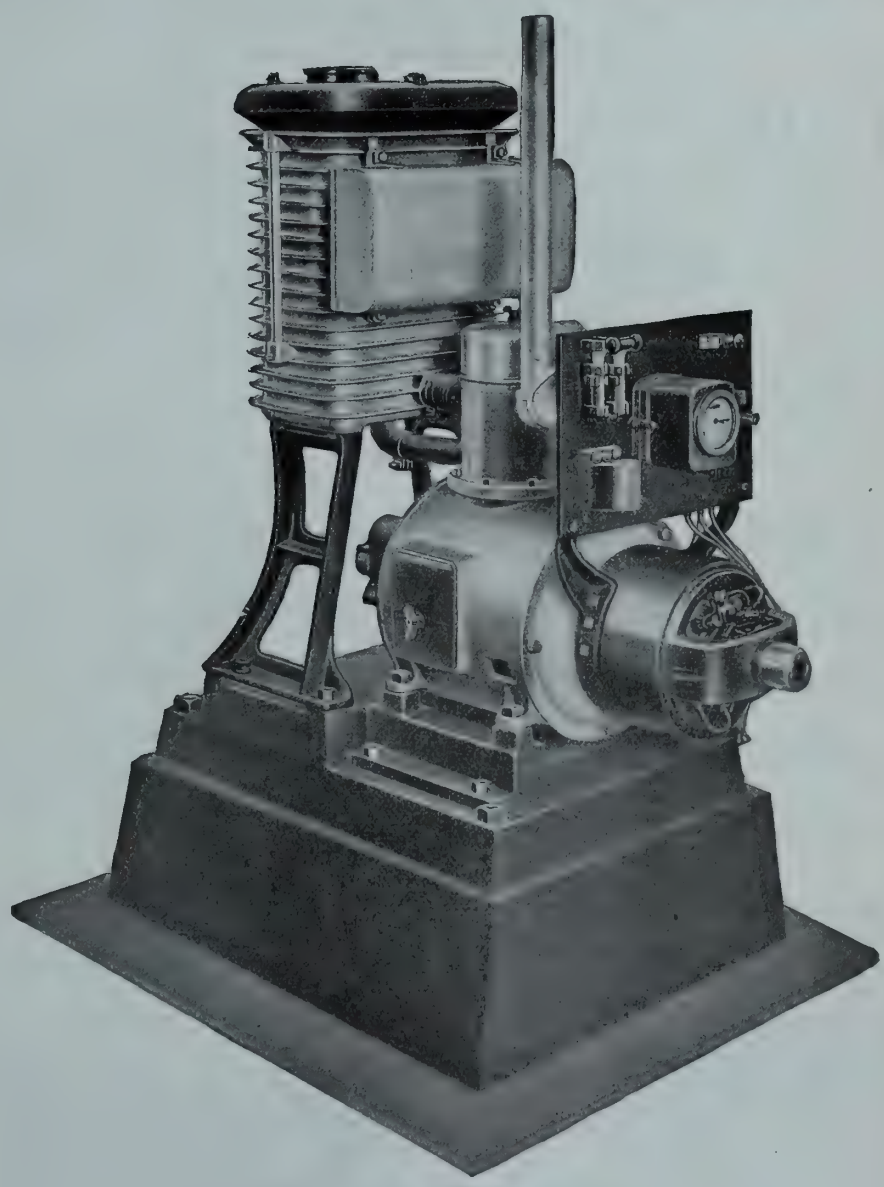
PLANTS---WATER SYSTEMS---MOTORS
HOUSEHOLD DEVICES---WIRES
AND SUPPLIES

Northern Electric Power and Light Plants are backed by one of the largest electrical manufacturers and distributors in Canada. For more than twenty years we have specialized in electrical supplies FOR THE FARM.



Tank and Motor

Hundreds of farmers are now buying water systems. Are you selling them? At your service, the most complete line---any size. Automatic ---Air-pressure---open tank or hand controlled.



¾ KW—Utility Plant—32 Volt

The greatest value ever offered the Canadian Farm

DEALERS:

The Electric Farm Plant field is practically untouched. Your prospects are numbered by the thousands. You can get into this profitable business by writing our nearest house to-day.

Northern Electric Company

LIMITED

Montreal
Halifax
Ottawa

Toronto
London
Winnipeg
Vancouver

Regina
Calgary
Edmonton

Fiat Tractor

Weight 5730 lbs.

Drawbar Pull in First Speed
5520 lbs.---18/25 H.P.

THE FIAT, after its powerful contribution to the Victory of the Allies by the supply of large number of motor cars, lorries, aviation engines and machine guns, is now devoting its activity to the construction of peace products.

In its new program the FIAT offers most elegant and perfect motor cars, motor trucks and *powerful and well finished agricultural tractors,* thus confirming once more the fame of its make, known for 20 years all over the world.

Agents to be appointed all over the Dominion

ADDRESS ALL ENQUIRIES TO

Elmo De Paoli
Westminster Hotel
TORONTO

OR

Italo-Canadian Motors Company
720 St. Paul Street West
MONTREAL

JOHN DEERE

WELLAND, CANADA.

THE TRADE MARK OF QUALITY
MADE FAMOUS BY GOOD IMPLEMENTS

Our Product

JOHN DEERE, in giving to the world the steel plow, made possible the development of much of our agricultural country and the growth of the business originated by and incident to his invention, has marked an epoch in the industrial progress of the world. Our factories, employing thousands of men, are engaged in the manufacture of agricultural implements for the purpose of supplying them to the farmers in all the countries of the world.

Our Beginning

FROM the humble beginning, starting with the invention of the steel plow in a country blacksmith shop in 1837, John Deere made rapid strides in the production of farm machinery, until now, after only three-quarters of a century, the combined Deere factories ship annually thirty thousand carloads of implements and vehicles, an average of twenty-five hundred a month, or nearly five train loads every working day in the year.

Our Growth

THIS marvelous growth was made possible by the superiority of the product and *selling through John Deere dealers only.*

EMMERSON said: "If a man write a better book, or preach a better sermon, or make a better mouse trap than another, though he build his home in a forest, the world will make a pathway to his door." We endorse, extend and modernize this piece of business philosophy.

Our Policy

OUR policy has always been, not only to build the best goods and sell them at fair prices, but to clear the business pathway by maintaining the most efficient selling organization ever assembled in the implement line.

Our Boast

OUR boast is that you can take any article in our line, compare it point for point with any competitive article, and sell ours on its merits.

Our 1920 Contract Proposition Will Interest *Every* Live Implement Dealer In Ontario

WE STILL HAVE SEVERAL GOOD TERRITORIES OPEN FOR 1920 CONTRACT, TO THE RIGHT DEALER. LET US HEAR FROM YOU *AT ONCE.*

JOHN DEERE MFG. CO., LIMITED, WELLAND, ONT.

JONAS HAGERMAN
Winner of Scale Grand Prize

Good old Jonas, he's worth his weight in gold;
He's won the prize for having most scales sold.

—Renfrew Times

Mr. Hagerman's Own Story

"I have been working for the Renfrew Machinery Company nearly seven years; during that time I have sold nearly two thousand scales.

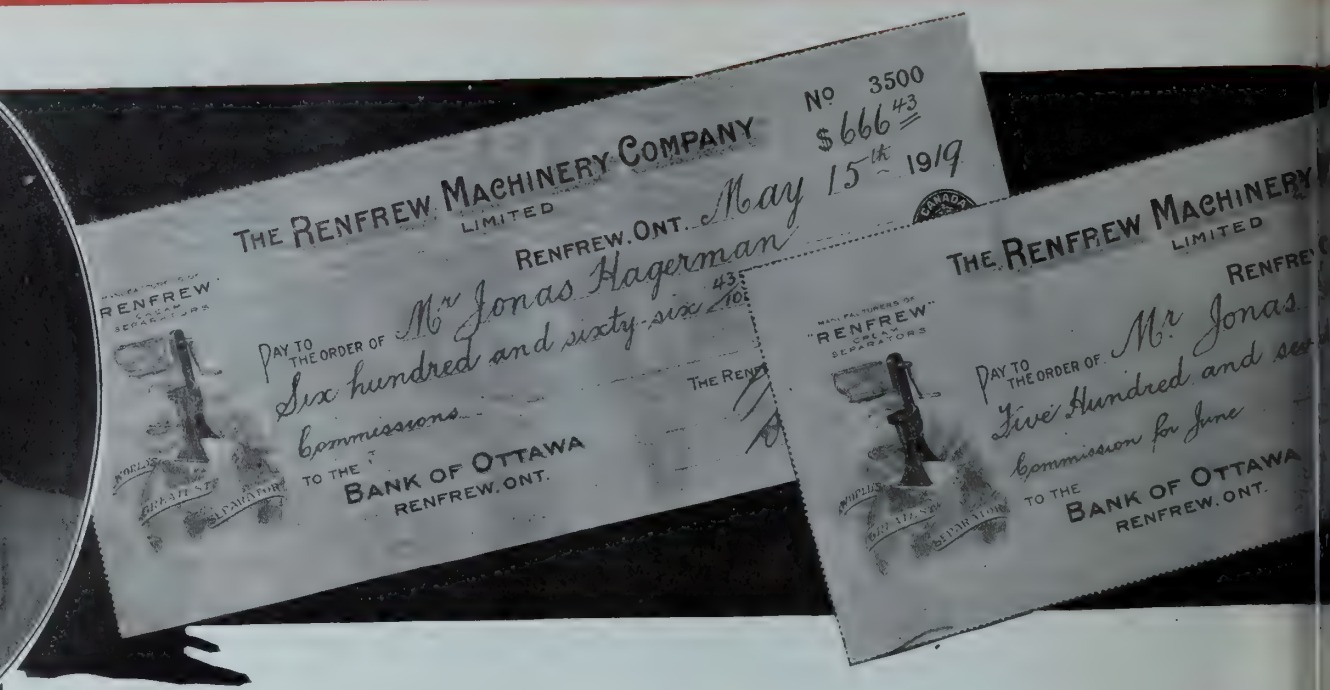
"My occupation previous to that has been farming. I find the Renfrew Scale one of the best selling propositions you can put on the market to-day. It is simply a gold mine if you get after the business in the right way.

"First, you want to get familiar with the article you are selling and be able to demonstrate your goods convincingly. As soon as you show your purchaser that he is losing money by not knowing exactly what his stock and produce weighs, the sale is yours. I expect to sell five carloads this year.

"During the time I have worked for this Company, I have earned in prizes to the amount of seven hundred and thirty-five dollars.

"My last cheque for July, 1919, was $1,115.91, which will prove the statement I have made that there is money in the game. Any man with ordinary ability can do what I have done, or more."

(Signed) "JONAS HAGERMAN,
Lansdowne, Ont.
'August 29, 1919."



How would YOU like

Jonas Hagerman handles Ren

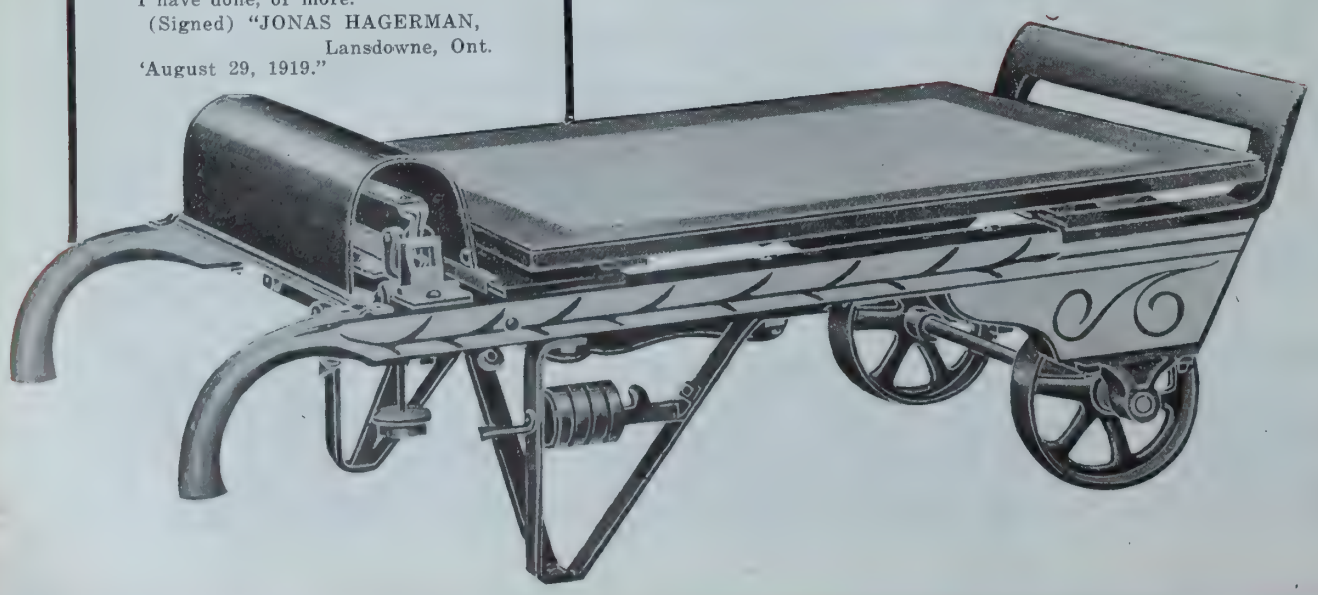
Right from the moment his keen eye lit upon a Renfrew Truck Scale advertisement one day seven years ago, Jonas Hagerman became a fervent believer in the tremendous opportunity opened up to him by Renfrew Truck Scales. Himself a keen farmer, he saw that his own neighbors and everybody else's neighbors would welcome this scale. For it saves unnecessary handling of produce everywhere on the farm. So Mr. Hagerman landed an agency and pitched right in selling the

RENFREW 2000-LB. TRUCK SCALE

After he had sold only sixty on consignment his judgment of the *Big Opportunity* in this line was confirmed. He began handling Renfrew Truck Scales in carload lots — hence those dandy fine cheques every month. He declares that he is no whirlwind sales-

DEALERS! Link up now befor

Remember, Mr
ability to work ha
not handle them i
cheques! If you a
do is to write us at
our agency propos

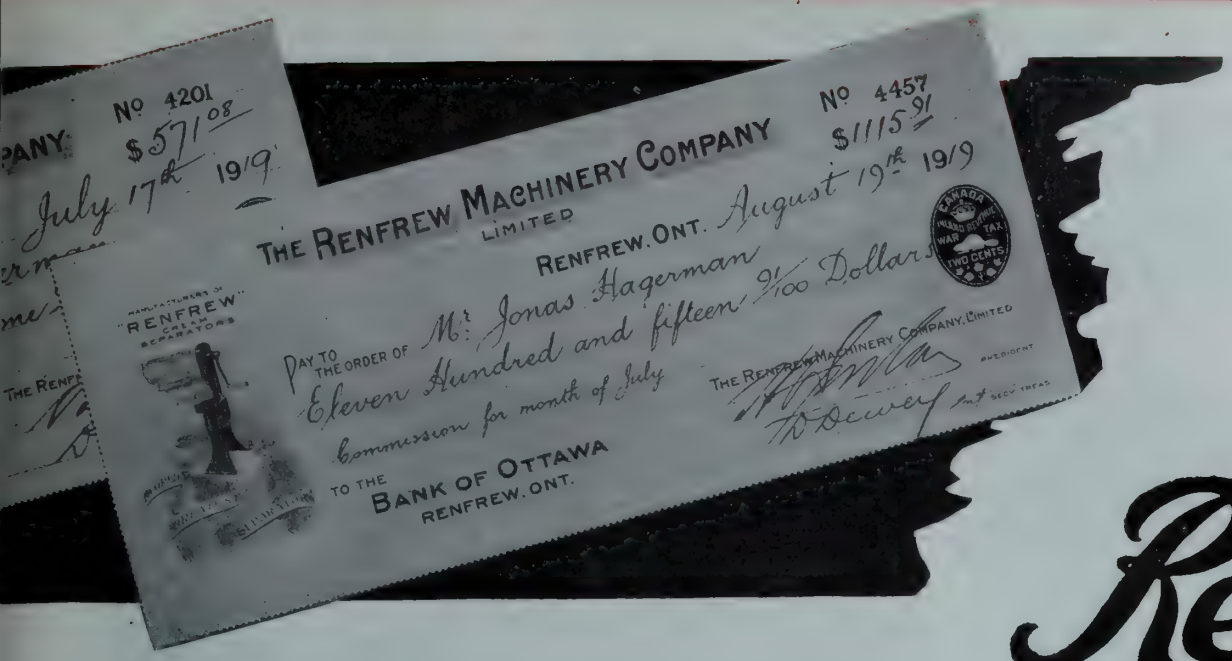


The Renfrew

Head Office a

Agencies Almost Everyw

Other lines: Renfrew Hous



Mr. Hagerman's Average Monthly Commission during the past 5 months was $681.00, or a total for the five months of $3405.00

Renfrew
TRUCK SCALE

o cash these dandy big cheques ?

ew Scales by the CARLOAD! So can you!

an. Any man can do likewise who will put his mind to the job for this scale, he declares, is a "gold mine."

er and above these fat commissions of his, he has won $735 prizes awarded by the Company in sales' competitions.

s soon as you show the farmer that he is losing money by not owing exactly what his stock and produce weighs," he ad-es, "the sale is yours. . . . You save money when you ndle these scales in carlots. . . . I expect to sell five car-ds this year."

nd sell them he surely will—for any man can see that Mr. agerman has got a scale that sells like hot cakes wherever he es. YOU can reap a harvest of sales, too.

territory is all snapped up!

erman hasn't got any corner on pep and you are already selling these scales why ts? You, too, can cash big commission selling Renfrew Scales the first thing to or scale literature and full particulars of

A Word About the Scale

"I sold a cow and a steer for $15.00 more than I would have received had I depended on guessing the weight," writes a farmer.

On one deal in steers another saved $28.75.

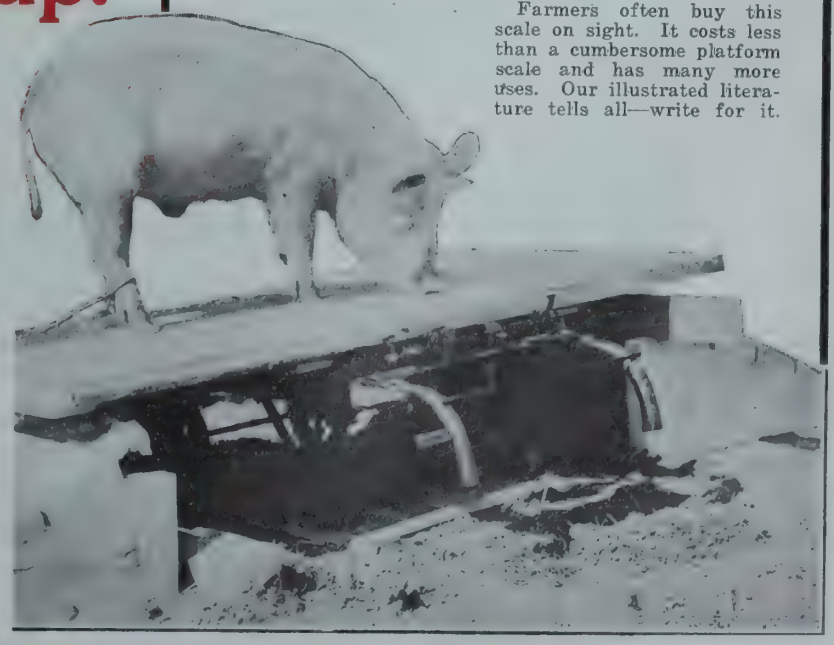
These men found out it pays handsomely to *know*—not guess—to a pound the correct weight of farm produce or livestock.

The Renfrew Handy Two Wheel Truck Scale will weigh anything from a pound to a ton. It is self-adjusting, and weighs accurately on uneven ground—the platform scale will not do so.

With the Renfrew Truck Scale you can weigh anything, anywhere, on the farm. With an inexpensive platform arrangement you can weigh cattle, horses, hogs, sheep, etc.

Every individual scale is tested for accuracy by a government expert inspector. Every scale carries certificate of correct weight.

Farmers often buy this scale on sight. It costs less than a cumbersome platform scale and has many more uses. Our illustrated literature tells all—write for it.



Machinery Co., Limited

Works: RENFREW, ONT.

in Canada, Eastern Branch, SUSSEX, N. B.
Quebec Branch, MONTREAL, P. Q.

d Scales—Renfrew Cream Separator—Happy armer Tractor

An Exchange of Money That Pays

When you buy Victory Bonds you simply exchange one kind of money for another.

A dollar bill is Canada's promise to pay.

So are Victory Bonds.

But Victory Bonds pay 5½% interest.

Consider the security behind Victory Bonds—

Canada and all that is contained therein.

Consider the good rate of interest—5½%.

Victory Bonds pay nearly twice as much as

Savings Banks.

Consider the saleability of Victory Bonds—

Their use as security for a loan—

Their prospective advancement in price—

Canada must have this money to clean up our obligations to our army and maintain the prosperity of our Country.

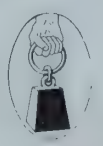
These are the best reasons in the world for exchanging one kind of money for another.

Every Canadian should put all his weight behind this Loan.

He should exchange every dollar possible for Victory Bonds — and every dollar he can save for the next ten months.

Buy Victory Bonds

Every Dollar of this Loan will be Spent in Canada



The Canadian Fairbanks-Morse Co., Limited

Halifax St. John Quebec Montreal Ottawa Toronto Hamilton
Windsor Winnipeg Saskatoon Calgary Vancouver Victoria

The World Famous Cream Separator the Farmer Wants

See that you are in line to supply it

"Melotte" CREAM SEPARATORS

Where they are made

Stocks now in our warehouses

Shipments constantly arriving

The demand greater than ever

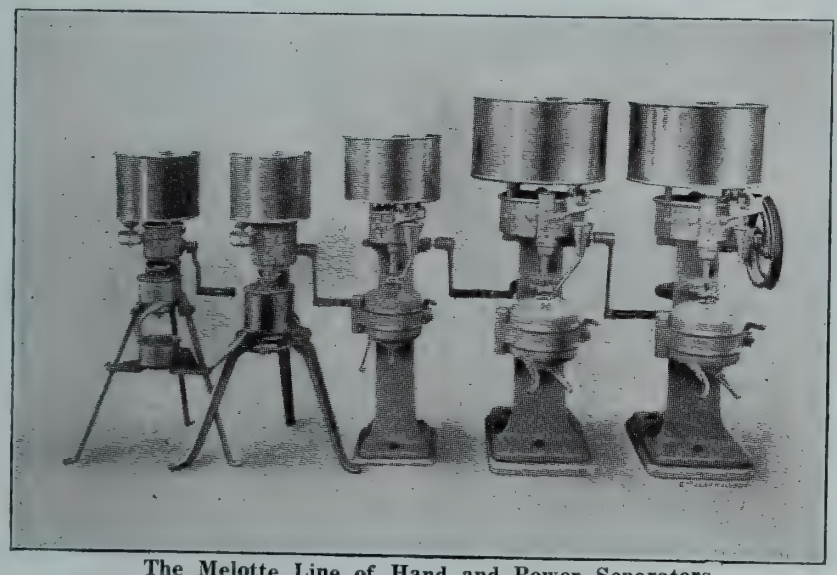
One of the Machine Shops

A View in the Foundry

Announcement to Agents!

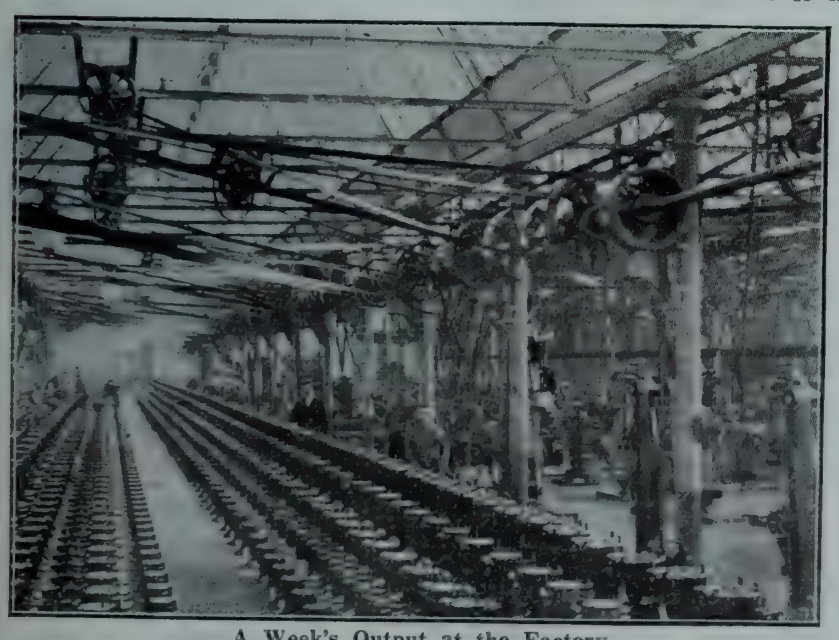
We regret to report the death of Mr. Jules Melotte, originator of the world-famous cream separator, an announcement of which appears elsewhere.

The record of his life is the story of the success of the Melotte Separator, which he lived to see established pre-eminent in the markets of every civilized country of the world—an achievement scarcely paralleled in business annals.



The Melotte Line of Hand and Power Separators

The unexampled popularity of the Melotte machine has only been emphasized by the experiences of the war. Great extensions have been necessary to the factory, which is working at high pressure in order to cope with the enormous demand.



A Week's Output at the Factory

Loading Melotte Separators for Canada

Do not be misled by the announcement of any spurious imitation but secure the contract for your territory for the sale of the only genuine Melotte from the sole distributors.

R. A. LISTER & CO. (Canada), Limited, Toronto and Winnipeg

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

IS

A CANADIAN COMPANY offering service of interest to and in the interest of Canadians.

Time payments made possible and profitable for Manufacturer, Dealer and Customer. Of particular interest to Automobile and Musical Instrument Trades.

LET US KNOW YOUR REQUIREMENTS

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

Bank of Hamilton Building, Toronto, Ontario

McArthur Building, Winnipeg, Man.

WE GIVE

"Quality and Service"

IN

TRACTOR and TRUCK STEEL CASTINGS

JOLIETTE STEEL CO., LIMITED

903 Read Building, Montreal

JOLIETTE, P.Q.

"NIAGARA" ACCESSORIES

"Niagara" Jacks

Six good models

"Niagara" Pumps

Efficient and durable

Chrome leathers used throughout

"Niagara" Bumpers

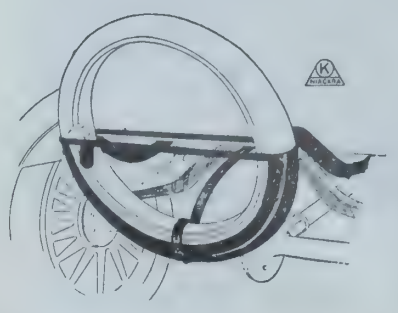
Every Niagara Bumper is built with shock-absorbing springs

"Niagara" Tire Carriers

The Best Yet!

"Lyon" Resilient Bumpers

Save the car without spoiling the bar



For Satisfaction

Specify "Niagara" Brand to your jobber; or write direct to the manufacturers.

Kinzinger, Bruce & Co., Limited

Niagara Falls Canada

C. E. LORD, I.H.C., DIES

C. E. LORD, manager of the patent department of the I.H.C., died a short time ago in Philadelphia, as the result of injuries received in an automobile accident. He was motoring to the Deering works, with W. F. Piper, an inventor, with whom he was conferring, when their car was hit by a locomotive. Mr. Lord's clothing caught in the front of the locomotive, and he was dragged a short distance. He was so severely injured that he died a few hours later. Burial took place at Somerville, Mass.

C. E. Lord

FORD MEN MAKE A PIONEER TRIP

J. P. LYNCH AND A. McLEOD, of the Lynch Auto Sales, Limited, Sault Ste. Marie, Ontario, arrived in Toronto Saturday, October 18, at 9.30 a.m., being the first car to cover the whole distance by the new trunk road, known as the Great Northern Railway. A Ford roadster car was used and no car trouble encountered. They report the roads in fair shape, except between Algoma and Cutler; between these points there is considerable muskeg and creek crossing and will not be passable for some time. There are at present 350 men and a large number of teams working on this section.

The trip was made in 42 hours, actual running time, an average of 11 miles per hour. This is the first car to cover the entire distance between Sault Ste. Marie and Sudbury, with the exception of the Pathfinder tour, which was made the first week in September.

M. MELOTTE DEAD

MONSIEUR JULES MELOTTE, originator of the Melotte cream separator, died recently in Belgium, at the age of 62. M. Melotte established his model factory at Remicourt, Belgium, a suburb of Liege, and so was one of the first sufferers from the Hun invasion. He was exiled from his country, until after the armistice, and worry as to the fate of his factory, no doubt, hastened his end. After the armistice, very fortunately, the plant was found to be intact, except for the theft of some machine tools, which were easily replaced.

M. Melotte was spared to see the re-establishment of the industry which had been his life work, and his energetic successors are maintaining the enormous output required to cope with the demand. Illustrations of the factory in operation are shown on another page of this issue. The Canadian distributors, R. A. Lister Co., report that a supply of Melottes in Canada is assured for the future.

CLOSE GARAGES EARLY?

AUTOMOTIVE dealers and car owners of Calgary are strongly opposing the petition circulated by one or two automotive firms asking that a by-law be passed "prohibiting the carrying on of the business of automotive repairing, or the sale of automotive accessories, excepting gasoline and oil, after 6 o'clock in the evening of each week day, or during any part of Sunday."

Such a by-law, were it passed, would cause confusion and considerable inconvenience. There is no real reason for such curtailment.

HAY TOOL SUGGESTION

Beatty Bros., Fergus, Ont., report that a difficulty has been encountered in selling hay tools to farmers in the fall and winter—it is the difficulty of erection. BT Bros. suggest that dealers should have little difficulty in this regard if they get hold of carpenters during this slack season, and get them to look after the installation, paying $4 or $5 a day, and adding this price to the cost to the farmer.

HEADS SERVICE DEPT.

THE Advance-Rumely Thresher Company, La Porte, Indiana, announces the formation of a service department in charge of George W. Iverson, of Chicago.

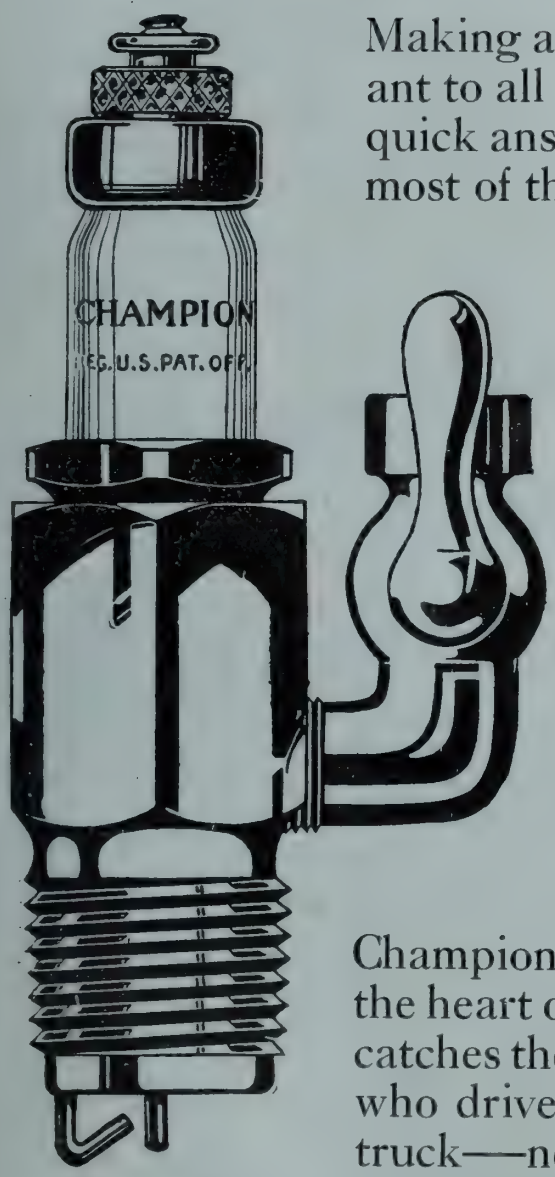
Mr. Iverson is a graduate in Agricultural Engineering at Iowa State College. He has had eleven years' experience in the tractor field, divided equally between practical mechanical work and study in class room and laboratory. He served with the American Army of Occupation in Germany for a short time, and was then recalled to Paris to assist in organizing the educational work among the soldiers of the A.E.F.

George W. Iverson

H. H. BIGGERT PROMOTED

H. H. Biggert, for several years superintendent of the International Harvester Company, of Hamilton, Ont., has joined the staff of the Emerson-Brantingham Company, of Rockford, Ill., Mr. Biggert has had wide experience in harvesting machinery construction.

Putting the Spark in a Cold Motor



Champion Priming Plug price $1.50

Making a motor hum with the first turnover is important to all motorists from now till next April. Getting a quick answer from the crank or the starter eliminates most of the hardships of cold-weather starting.

Champion

Priming Plugs

Will not only help your customers to run their cars in comfort all winter, but they save gasoline, starters and batteries.

They take the worry and work out of driving a car, and it means more sales and profits to you. Show your customers how a "Prime Saves Time."

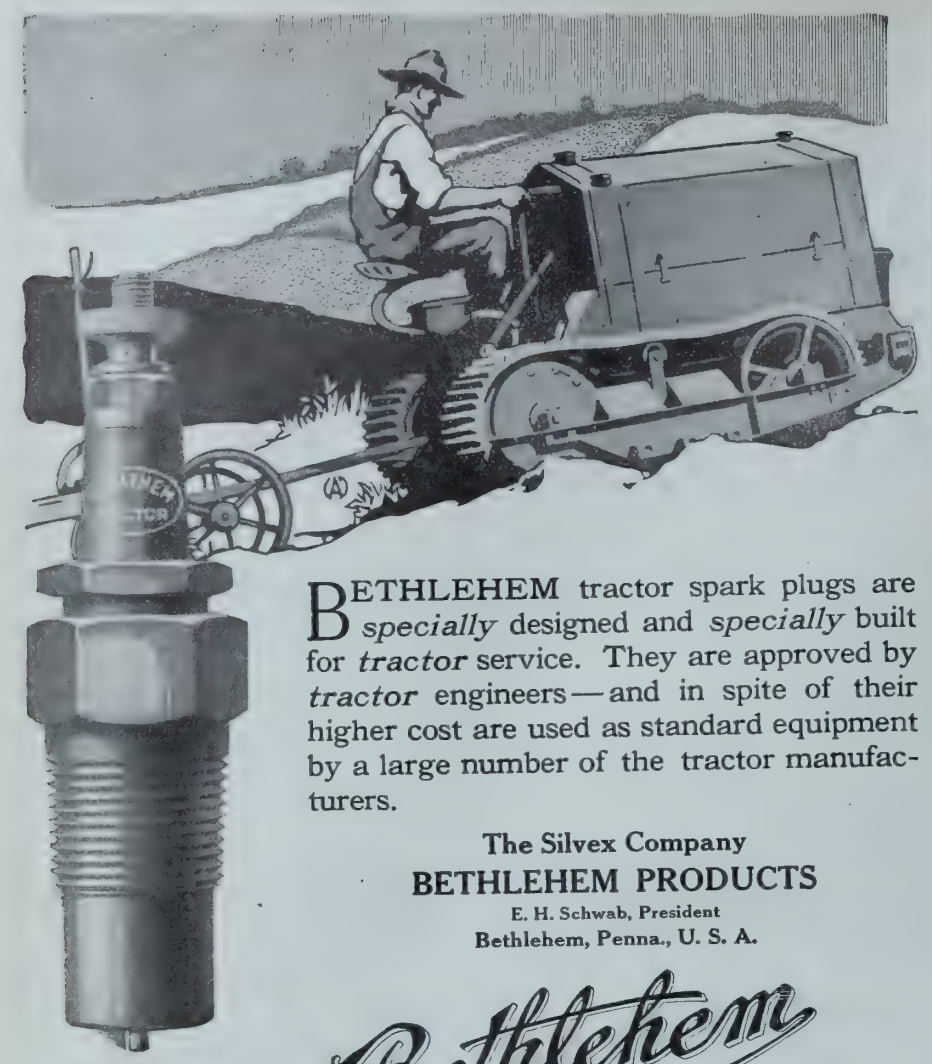
Champion Priming Plugs place the gasoline right into the heart of the motor, at the sparking point, where it catches the first spark. This is the plug that every man who drives his own car—whether passenger car or truck—needs right now. A stock of Champion Priming Plugs will help you to give a service that your customers will appreciate, and increase sales in an otherwise dull accessory season.

Every Champion is guaranteed to give "complete satisfaction to the user or free repair or replacement will be made."

Any jobber in motor equipment can supply you.

Champion Spark Plug Co. of Canada, Limited

WINDSOR - - ONTARIO



BETHLEHEM tractor spark plugs are *specially* designed and *specially* built for *tractor* service. They are approved by *tractor* engineers—and in spite of their higher cost are used as standard equipment by a large number of the tractor manufacturers.

The Silvex Company
BETHLEHEM PRODUCTS
E. H. Schwab, President
Bethlehem, Penna., U. S. A.

Bethlehem SPARK PLUGS

¾ inch long mica tractor plug. Used as standard equipment on International Harvester Tractor and others.

Lubricants of Quality

A LITTLE GOES A LONG WAY

HARRIS
TRADE MARK-REG U.S. PAT OFF
OILS AND GREASES

AND EVERY DROP COUNTS

HARRIS TRACTOR CYLINDER OILS

MADE IN FOUR GRADES

HEAVY, EXTRA HEAVY, SPECIAL AND EXCELLO

from Premium Pennsylvania Crude by a careful process to meet the exacting conditions of the Tractor Motor---HARRIS OILS have a high fire test and are very viscous. One of the four grades above listed will properly lubricate any Tractor---HARRIS OILS have been on the market for over 35 years and have won the distinction of being

AMERICA'S LEADING LUBRICANTS

Write for Prices and Booklet

A. W. Harris Oil Co.
326-328 South Water St.
PROVIDENCE, R.I.

NEWS — OF THE TRADE FOR THE TRADE

ONTARIO

OTTAWA.—February 21-28 will be the date for the Automobile Show.

TORONTO.—The Automobile and Truck Show will be held in February, 1920.

FORT ERIE.—Warren M. Finch, harness dealer, has taken on a Ford agency.

BETHANY.—S. W. Sisson is now handling the agency for the Lauson Tractor.

HASTINGS.—J. H. Hess, Mayor of Hastings, has erected an up-to-date public garage.

TORONTO.—The Wilson Motor Body Co., Limited, has been incorporated with a capital of $40,000.

KEMPTVILLE.—J. W. Brown has been appointed local dealer for the Lauson Tractor.

PORT COLBORNE.—L. J. Shickluna, Hudson and Doidge dealer, is enlarging his premises.

NAPANEE.—Mr. Wiseman, owner of Wiseman Garage, has purchased the Market Hotel property.

OSHAWA.—The General Motors of Canada, Limited, subscribed for $1,000,000 worth of Victory Bonds.

NIAGARA-ON-THE-LAKE. — A. R. Inskeep, Niagara Garage, has moved into new premises in Ricardo street.

CHATHAM.—Robert McIrvine, formerly Ford dealer, has sold his garage and business to Stewart Campbell.

BRANTFORD.—Joseph Fernihaugh of York has purchased the garage business of George A. Tutt, Colborne St.

LANGTON.—G. H. Hetherington, undertaker and furniture dealer, is engaging in the auto accessory business.

TORONTO.—The Dayton Airless Tire of Canada, Limited, has been incorporated with a capital of $250,000.

LONDON. — Mr. Bolte, assistant manager of the International Harvester Co. of Canada, was a visitor recently in the London office.

FENELON FALLS.—Lithgow Robson, for many years in the implement business with his brother, W. T., has moved to Lindsay.

PLANTAGENET. — The Lauson Manufacturing Co., New Holstein, Wisconsin, has appointed F. J. LaPointe as agent for the Lauson Tractor.

BRANTFORD.—Houlding and Walker, Ltd., has been incorporated with a capital of $100,000. The new company will manufacture auto tires and accessories.

GRANTON.—H. H. Millson, who for some years has been acting as Deering agent here, has accepted a position with the International Harvester Co., London, Ont.

BRANTFORD.—A new garage, with a Chevrolet agency, has just been opened here by Robert McIrvine, until recently in the automobile business in Chatham.

VARNA.—E. Beatty, son of the Deering agent, Mr. L. Beatty, has secured a position in the Repair Department of the International Harvester Co. London, Ont.

TWEED.—Felix Rashotte is building a new garage and show-room. It will be one of the latest and best in Eastern Ontario. He handles Fords, repair parts, accessories, etc.

PORT ROWAN.—The garage owned by I. A. Procunier, lived up to its ad: "Port Rowan's Fireproof Garage," when it came out unscathed after a recent disastrous local blaze.

TORONTO.—Jas. Howie, formerly with Aikenhead Hardware, Limited, has been appointed sales manager for Samuel Trees Co., hardware, harness and auto accessory dealers.

KITCHENER.—The Robbins and Myers plant, manufacturing dynamos, will be ready for occupation about January 1. It will be 150 ft. by 300 ft., and will employ 500 persons.

KEMPTVILLE. — Tom Cappell, manager of Anderson, Langstaff Garage, and family, have returned from camping on the Rideau; "Tommy" reports shooting and fishing good.

TORONTO.—The Domestic Engineering Company, of Dayton, Ohio, makers of Delco-Light products, has merged with the General Motors Corporation and will be operated as a branch.

BELLEVILLE.—Greenleaf, Limited, has bought and is equipping the old foundry property. A garage with all latest improvements, including rest rooms for ladies, will be erected.

LONDON.—B. M. Angle, of the Chicago Office of the International Harvester Company, was a visitor at the London Office on his way home from the Ottawa Tractor Demonstration.

HAMILTON. — The International Harvester Co. propose to erect a $200,000 addition to the warehouse of this plow works. The work on the building will be started as soon as possible.

OTTAWA.—C. E. Taylor and A. E. Bannerman, of the Continental Storage Battery Co., Limited, have been incorporated with a capital of $50,000. They will repair and deal in automobiles.

ST. CATHARINES.—W. A. Humphrey has commenced the erection of an up-to-date garage on the curling rink site on Mechanic Street. The garage will be 50 x 100 feet and two stories high.

LONDON.—H. E. Burrows, Eastern Canadian Motor Truck salesman for International Trucks, was a visitor in the London office of the International Harvester Co., after the Chatham plowing demonstration.

STEVENSVILLE.—E. L. Spear and Son, who have dealt in autos and accessories, as well as implements, are going out of the implement end of the business, in order to give more attention to the rest of their business.

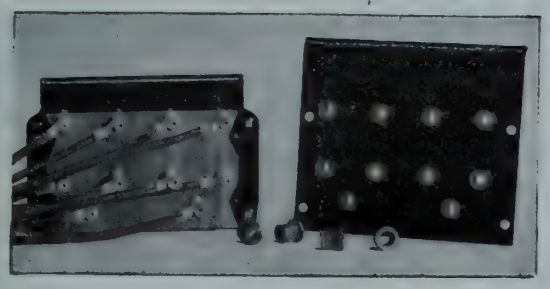
HAMILTON.—N. B. Agnew, assistant manager of the Dales Office of the International Harvester Co., visited the London branch of the International Harvester Co. on his way from the Plowing Match at Chatham.

LONDON.—J. A. McConvry, manager of the London Ontario branch of the International Harvester Company, has been appointed by the Chicago office to be one of the vice-presidents of the International Harvester Company of Canada.

AILSA CRAIG.—Miss Macfarlane, daughter of J. L. Macfarlane, was married Oct. 14, in St. Peter's Cathedral, London, Ontario, to John Cox, Detroit, son of the late Mr. and Mrs. M. A. Cox, London, Ontario. The bride was on the office staff of the International Harvester Co., London.

LONDON.—Messrs. Beemer and Co., Limited, are building an extension adjoining the west side of their present garage; it will be an exact duplicate of the present building. The lower floor will be for storage and on the upper floor will be installed an up-to-date paint shop and upholstery plant. They handle the Chalmers, Cadillac and Gray-Dort cars; also the Republic, White and International trucks.

"Casco"
Coil Box Protector



The Only Protector for FORD CARS Against Rain and Wet Weather

Ford cars frequently stall in wet weather. The water works in between the hood—into the coil box, causing short circuit.
This inconvenience is prevented if you use the "Casco" Box Protector. It covers the Ignition and Coil Box.
Dryness is guaranteed.

Without Rubber	$1.00
Rubber Insulated	1.50

"Casco"
Oil Drain Cock

The "Casco" Oil Drain Cock is Automatic in action. No cock wrench is required.

No Ford owner should be without one, as it enables him to easily keep close tab on the oil level and prevent unnecessary wear of bearings.

Complete, per pair, $1.50

MR. DEALER!

Every Ford Owner Needs These "CASCO" Products

THEY SELL FAST *and* PAY GOOD PROFIT

Every community in the land can boast of a large number of Ford car owners. **What a big field to sell to.**

The average man will sometimes buy an article he does not need, but show a man with a Ford any of the "Casco" products described here, and he knows at once that he NEEDS them—and there you are.

CASCO MANUFACTURING CO.

THOMASVILLE, GA., U.S.A.

Canadian Registration Applied for

A. H. Frazier, 1150 Homer St., Vancouver, B.C.

Manufacturers Agent

"Casco"
Fan Belt Guide

Put on in a Minute

50c.

Here it is, the Radius Rod Brace, Anti-Rattler Axle Support and Safety Device all in one.

There is no Ford car accessory made that possesses such a strong combination of strength and safety.

Fits all model Fords to 1919 inclusive.

Hold 'Em in the Road

$5.00

"Hold 'Em in the Road" for Ford Cars

CANADIAN JOBBERS:

Merrick-Anderson Co., Limited, Winnipeg
John Millen & Son, Limited, - Montreal, Toronto

Automotive Accessories *and* Implement Equipment

GAS PRODUCER

THE B. K. F. Corporation, 20 East Jackson Bldg., Chicago, Ill., announces the marketing of the B. K. F. Gas Producer and Timer for Ford cars. The Gas Producer is automatically controlled, both in heat and air, the heat being controlled by a special thermostat. The air rod is connected up to the throttle arm, making an automatic control of the air at various speeds. By these controls, the same temperature is maintained in all seasons of the year, fully vaporizing the gas and sending it to the cylinders in a ribbon form and obtaining all the power possible from the fuel. The B. K. F. Timer is operated without oil and is guaranteed for the life of the car. The B. K. F. Timer is claimed to eliminate the hard starting trouble of the Ford car. By installing a B. K. F. Gas Producer and Timer, the Ford owner is said to obtain from 25 per cent. to 100 per cent. increase in mileage, as well as greater efficiency.

CLARK DISC WHEEL

THE Clark Equipment Co., 1415 Railway Exchange, Chicago, has placed on the market the new Clark Disc Steel Wheel for pneumatic motor truck tires. Reduction in mechanical repairs, increase in permissible speed, decrease in gasoline consumption, decrease in oil consumption, less fatigue for the operator, more efficiency, less breakage of load, especially where fragile goods are carried; greater tractive ability, more frequent hauls, less wear on the roads.

These advantages have been noted in cases where trucks have been run with pneumatic tires for a considerable time. Their use has become so wide that a list of owners of pneumatic-equipped motor trucks reads like a business directory. Several of the large tire manufacturers have established motor freight routes between widely separated cities. The speed of these trucks results in a much shorter run between these cities than is possible via freight transportation, and they have prevented and relieved congestion at railroad terminals.

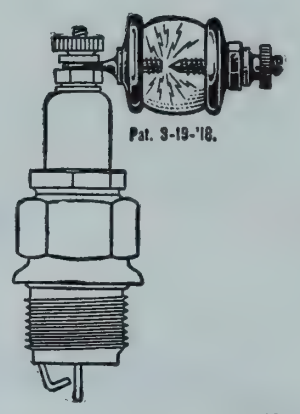
MONTANA TRACTOR

A TRACTOR with several distinctive features has recently been placed on the market by the Montana Tractor Co., Tinley Park, Cook Co., Illinois. This tractor has a direct chain drive on all wheels, *without a differential.* The "Montana" does not travel in the furrow. It is operated entirely on unplowed ground. It weighs 5,000 pounds, and is sold for $1,150, f.o.b. factory.

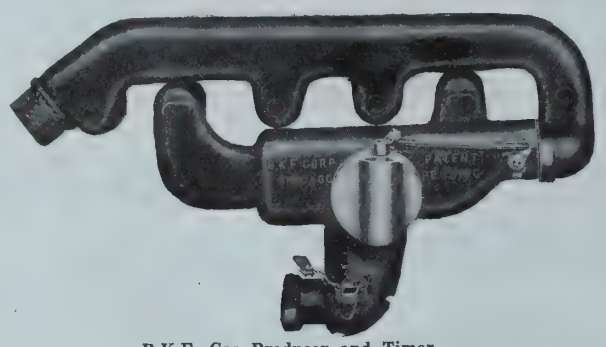
BEAR Q.D. NON-SKIDS

THE Bear Q.D. Non-skids are manufactured by the Bear Mfg. Co., Rock Island, Ill. The chief merit claimed is that it is a "chain that can't slip." Other features are: Gives positive traction; pulls on felloes and spokes, thereby relieving tires of all extra strain and wear; no special tools necessary to put it on; simplicity; only the cross-chains wear out; chain is spaced apart.

Clark Disc Steel Wheel for Pneumatic Motor Truck Tire Equipment.

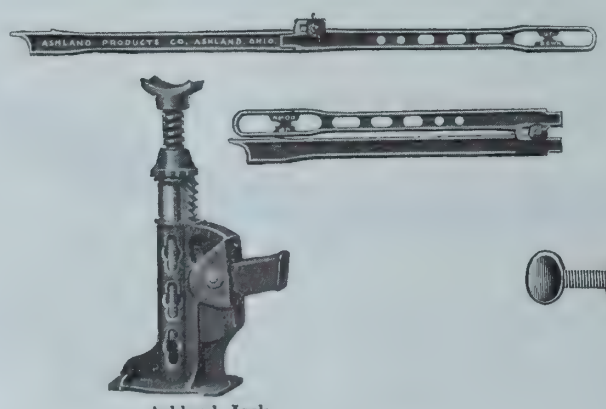


Universal Spark Plug Intensifier

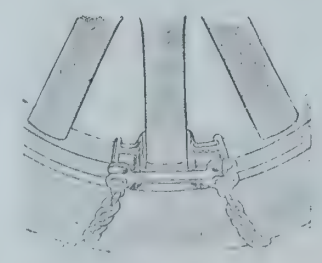


B.K.F. Gas Producer and Timer

The Montana Tractor.



Ashland Jack.



Bear Q. D. Non-Skid Chains

Weaver Pulley Clamp

TIRE CARRIER

THE Almetl Tire Carrier and Protection is a new product of the Almetl Accessories Corporation, 106-110 Seventh Ave., N.Y. The manufacturers claim that it is an excellent tire carrier because—It is easily attached; it is easily opened; it is of metallic construction which will outlast the life of the car; it does not require the use of either canvas cover, chain or straps.

It is a tire protector because—It completely houses the tire; it positively protects the spare tire from all detrimental weather elements, such as rain, sun, humidity and heat; it is absolutely thief-proof.

SPARK PLUG INTENSIFIER

THIS device consists of an adjustable terminal point set in a glass cylinder which magnifies the spark. It is attached to the spark plug as shown and is designed to insure perfect operation under all conditions. It is, in effect, an additional gap which tends to intensify the spark. As this gap is visible through the magnifying glass cylinder it also affords opportunity to check up the action of each individual plug. It is manufactured by the Universal Mfg. & Sales Co., 552 West Harrison Street, Chicago.

WEAVER PULLER CLAMP

WELL-EQUIPPED garages are often called upon to handle such small and accurately finished parts as the ball races of generator and motor bearings. A new puller clamp designed for this work, used in connection with a 20-ton press, consists of two heavy side brackets supporting a pair of spring-steel plates, with notches of graded sizes in their adjacent edges. Adjusting thumbscrews in the brackets adapt the clamp to work of varied dimensions, the notched plates locking securely into the ball-race groove. The clamp is made in two sizes, with 9 or 16-in. plates, and manufactured by the Weaver Corporation, Springfield, Ill.

APC JACK

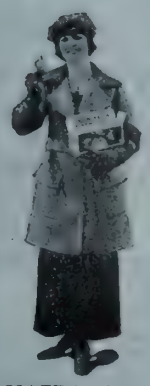
THE Ashland Products Co., Ashland, Ohio, claim several new features for the No. 25 APC ratchet-controlled jack. This jack is 28 inches long, and folds to 14 inches. Lifting capacity, 3,000 pounds. By using the combination screw in connection with the ratchet gears, there is a very wide range of adjustment, permitting the user to go as low as 9½ inches, and raised to 18½ inches. With the extension handle this gives a long leverage, making it extremely easy lifting, and enables you to place the jack in position under the car without crawling under. Then you can either raise or lower the load by simply reversing the handle in the socket so that you can place the jack in position and raise or lower the load again without removing your hand from the handle.

C. G. E.
Automobile Accessories
"Tested for Service"

The great and growing tendency of all classes of the community is to buy articles of superior quality. C.G.E. Automobile Accessories are undoubtedly without a peer in their respective fields. It is for this reason that they are invariably accepted as standards of value wherever quality is the predominating feature.

ATWATER KENT IGNITION

On the firing line in war or in peace—wherever unfailing performance, simplicity and refinement of construction are required—there you will find Atwater Kent ignition.



EDISON MAZDA AUTO LAMPS

Are made in Canada, expressly to withstand the severe usage Automobile Lamps are subject to. The electrical equipment of practically every well known car now in service has been designed to give its most efficient operation, when equipped with Mazda Lamps and for this reason Edison Mazda Lamps should again be installed when lamp renewals are required.

"KOPPER KING" SPARK PLUGS.

The body of a "Kopper King" Spark Plug is heavily coated with copper, which eliminates rust trouble. For satisfaction-giving qualities the "Kopper King" is without an equal.

GOLIATH SPARK PLUGS

A spark plug of careful construction and extra strength, well suited to meet the most strenuous demands of pleasure car or motor truck operation.

PYRENE FIRE EXTINGUISHERS

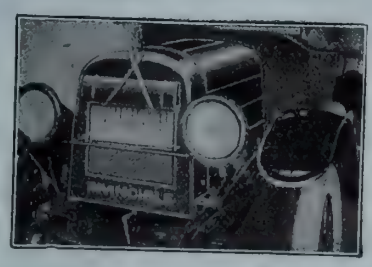
The Pyrene will extinguish the flames of blazing gasoline, kerosene, benzine, acetylene gas, etc., whereas water makes such fires worse, as it spreads the flames. It is safe and certain on electrical fires.

EDISON MAZDA LAMPS

"Miss Irristible," the smiling young lady portrayed above, is an enthusiastic booster of Edison Mazda Lamps. She knows that quality and service are the two strong points of these ever efficient lamps. Buy Edison Mazda Lamps wherever you see this girl in the window, and know what it is to be free from lamp trouble.

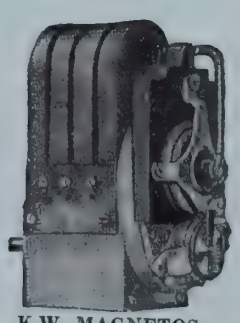
ATWATER KENT IGNITION

Atwater Kent Ignition is known throughout the automobile world for its accuracy and excellence of manufacture and for the scientific precision with which it operates.



RADIATOR AND HOOD COVERS

These covers are made in the combination rolling and split door type. They are well made from selected material and warranted to stand severe usage. When ordering state year and model of car.



K.W. MAGNETOS.

K.W. Magnetos make an excellent source of supply for ignition systems, tractors and lighting outfits. They are of rugged construction and yet simple in operation. Absolutely nothing to get out of order.

Dealers everywhere sell C. G. E. Automobile Accessories

Canadian General Electric Company, Limited

Head Office - TORONTO

Branch Offices: Montreal, Quebec, Halifax, Sydney, St. John, Ottawa, Hamilton, London, Windsor, Cobalt, South Porcupine, Winnipeg, Calgary, Edmonton, Nelson, Vancouver and Victoria.

Manufacturers and Distributors of Electrical goods for every purpose. Wholesale only. Dealers everywhere sell C. G. E. Products.

TIMER ELEVATOR

THE Thomas Timer Elevator is now placed on the market, distributed by The Thomas-Anderson Corporation, 624 South Michigan Ave., Chicago. The following claims are made:

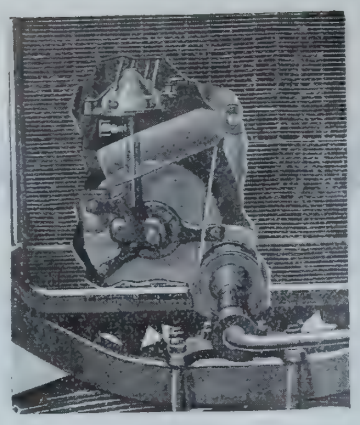
Eliminates ignition trouble because it elevates the timer from the usual position at the end of the crank shaft, where oil working out of the crank case soon insulates the timer, thereby causing improper motor operation.

Raises the timer to a position where it is protected from mud and water splashing through the radiator.

Permits overhead wiring—as it should be—and provides an ignition system which is comparable to ignition systems employed on the highest priced cars.

Lifts the timer up where you can get at it. In its usual position on the Ford car it is practically inaccessible.

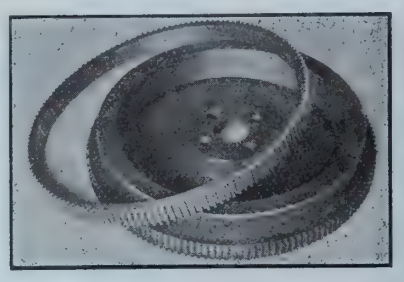
Will fit any Ford car, truck or tractor. It is not necessary to remove the radiator to install it. It can be installed in 20 minutes without special fittings or tools.



Thomas Timer Elevator.

STEEL-RING GEAR

INVESTIGATION of automobile-starter trouble often discloses the fact that the gear teeth on the rim of the cast-iron flywheel have become worn, making transmission of power from the electric starting motor unreliable. To remedy this, the Kent Auto Parts Co., 1743 Logan St., Denver, Colorado, has brought out a steel-ring gear, which may be fitted on the rim of the flywheel after the worn gear teeth have been removed in a lathe, the mechanism thus being made as good as new. The makers claim that these gears save the cost of tearing down the car each time a factory wheel is put in, and further assert that they supply a starter that will last through the life of a car.



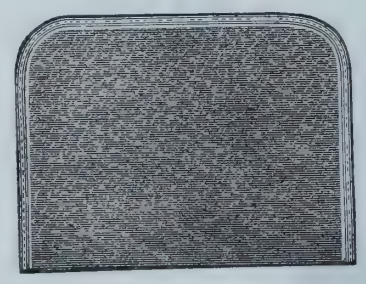
Kent Auto Parts—Starter Steel Ring Gears

LOW-PRICED AUTO

HERE we have a car costing about one-third the price of a Ford. It is the "Spacke," a product of the Spacke Machine and Tool Co., Indianapolis, Indiana. It costs $295 in Indianapolis, and is not yet on the Canadian market. It can cover 10,000 miles per year at a weekly cost of $4, say the manufacturers. It has a 9-13 h.p. motor, and is equipped with wire wheels. It is equipped with a pressed steel, racing type body and has bucket seats. Speed 3-35 m.p.h.

DOOR SHIELDS

THESE door shields, manufactured by McKinnon Industries, St. Catharines, are designed to save the finish on the doors, overcome unsightly finger marks, and give car a finishing touch. They can be tacked under upholstering on inside of car, and then bent down over top. They are lined with sheet metal.



McKinnon Door Shield.

DEMOUNTABLE RIM

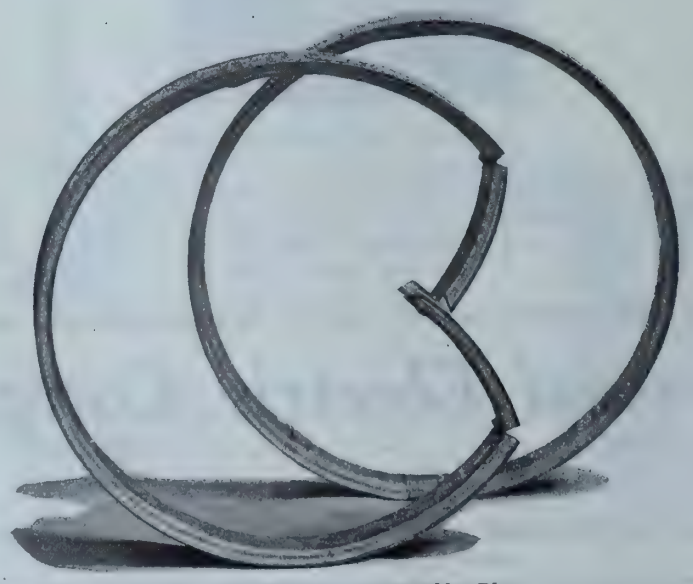
THE illustration shows a new demountable rim developed by Judson Harley Miskimen, of Glendive, Montana, the object of which is to save time, labor and expense of tools—no tools required but your two hands—by making it easy to remove the tire and still have a rim that will not creep or squeak, and will last as long as a solid rim.

The hinges at the joints are all pinned and present no protruding lugs or bumps to interfere with the wheel, tire or inner tube. The construction is such that when "in the round" it looks as perfect as a solid rim. The centre joint of the rim is so constructed that when in the circular position, the beads act as a reinforcement and maintains a circular shape. It is claimed a tire can be taken off or put on in two seconds. It is patented in the United States. Letters patent have been applied for in Canada.

United Heavy Duty Spark Plug

Haywood's "Silvur Lined" Moulds

Ideal Auto Tray



Miskimen Demountable Rim.

KOBZY SIGNAL

KOBZY SIGNAL, made by Chicago Die and Specialty Co., 327 S. La Salle St., Chicago, and put on rear fender is controlled at the steering wheel, right where you can get at it instantly, and works independently of car brakes or levers. There are three signal arms in the signal box, worked by a small lever at the steering wheel. A slight push of lever to the right and the signal instantly flies out of the right of the box. A push to the left works "Left" signal, and the down push works "Stop" signal. At night all arms, when in use, are illuminated by a bright light. The car following just simply *can't* overlook it, as its operation is instantaneous, absolutely certain and attractive. It obviates the necessity of the driver looking around. A red light deflected from a small electric light bulb is fastened to the lever box and illuminates when lever is used, then the lever is returned to neutral, the signal drops back in the box and both the signal light and the lever light are extinguished. The lever light prevents driver from forgetting to drop signal. Signals are always fresh, readable, bright—never get weather-beaten or covered with snow, rain or mud; they are weather protected and only exposed when in use. The signal arms are readable at a distance of 150 feet and clearly visible for a full block, both day and night. The action of the signal arms is so clear in showing the intended direction of the car that it is unnecessary for the driver behind to read them.

UNITED SPARK PLUG

A SPECIAL feature of the spark plug manufactured by the United Mfg. & Distributing Co., Lake Shore Drive and Ohio Street, Chicago, is the locked terminal feature. This terminal retaining feature embodies a spiral spring which is encased above the porcelain. It keeps the ribbed top of the plug tight up against the ribs of the terminal clip. These ribs fit into grooves in the thumbscrew and lock and so form a positive contact. The plug itself is of very heavy construction and is made in two sizes, the heavy-duty size for trucks and tractors and the junior model for cars.

IDEAL AUTO TRAY

THE Ideal Auto Tray is manufactured by the Lewis-Geer Mfg. Co., Ypsilanti, Mich. The tray is thirty-seven inches long, 22 inches wide, three inches from floor on four roller bearing malleable iron casters. It has neatly upholstered head rest and rack on each side for tools. With this, you don't roll around in the dirt and grease while working under your car but keep clean and rest yourself. It has a natural wood finish.

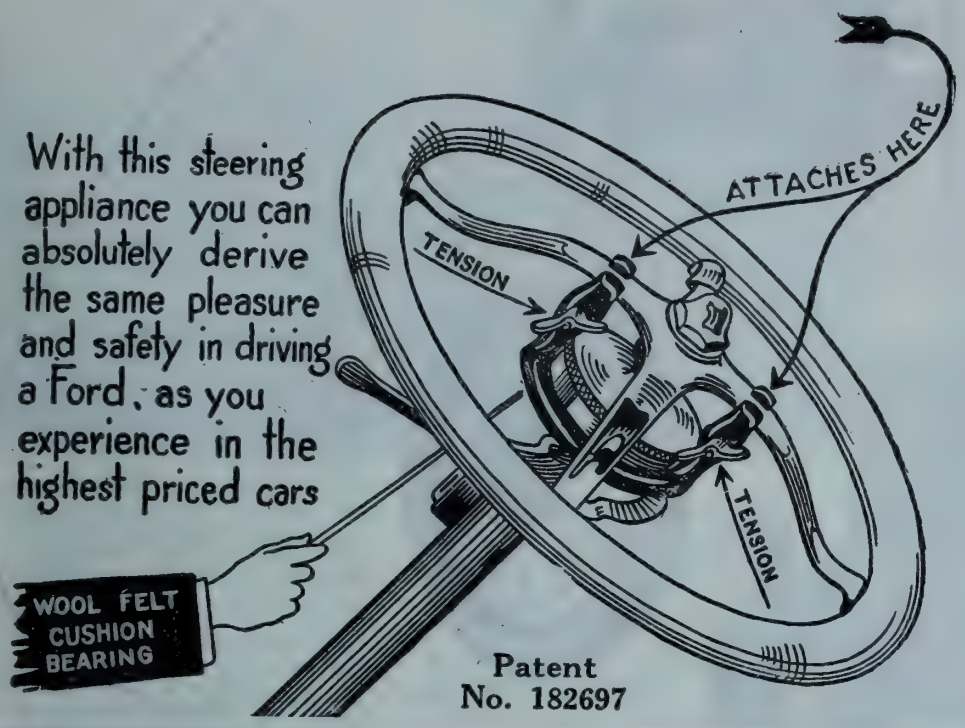
RETREAD MOLDS

HAYWOOD'S "Silvur Lined" molds are quarter-circle retreading molds, especially designed for curing ribbed treads on tread-worn tires by the so-called Dry Cure process. The steam is confined to the interior of the molds and does not come into contact with the rubber.

A distinctive feature of these molds is the fact that they are die cast. As every mold is cast from a master matrix there is no chance for variation and the process is said to give an absolutely smooth curing surface. At each end of the Silvur Lined vulcanizers there is a two-inch cooling flange, permitting a gradual tapering off of heat and pressure, for the purpose of eliminating mold marks. The Silvur Lined Retreading molds are manufactured by the Haywood Tire and Equipment Company, of Indianapolis, Ind., and come in two sizes, the A-15 for 3, 3½ and 4-inch tires, and the A-16 for 4, 4½ and 5-inch tires.

Ford Steering Control

With this steering appliance you can absolutely derive the same pleasure and safety in driving a Ford, as you experience in the highest priced cars



Patent No. 182697

An easy seller and a good profit-maker

THIS IS WHAT IT DOES

1. Relieves all the strain of gripping steering wheel.
2. Minimizes the danger of car swerving on rough roads, thus preventing accidents.
3. Economizes on gasoline, as the car is guided in a straighter line.
4. Saves tires by eliminating the quiver and friction on front wheels.
5. Reduces the rattle and shake fifty per cent., thus saving on repairs.
6. Practically does away with cold hands in winter caused by gripping the wheel tightly.

We challenge all other makes of steering devices, including worm gears, in contest, in the control, steering and driving of a Ford automobile.

Price to consumer $3.75. DEALERS, drop us a card for agency proposition and full particulars.

Seven-year-old boy drives Ford "hands-off" for sixty feet, two wheels bumping over 2 x 4 scantling, the other two on level road
—AND THE DIRECTION OF THE CAR WAS NOT CHANGED

McKenzie, Crews & Company, Richmond Bldg., Toronto, Ont.

LIGHTING PLANT

THE Matthews Engineering Co., Sandusky, Ohio, manufactures what it calls a full automatic lighting plant. The automatic features lie in the spontaneous starting of the generator and recharging of the battery after it has become approximately 15 per cent. discharged, and also in the assumption of the load by the generator when it becomes heavier than is for the best interests of the battery. In the average home the running periods of the generator would total about one hour per day. Full automatic lighting plants are made with the following capacities: 15, 10, 5, 2 and 1 K.W., and 300 watts (0.3 kilowatt).

The 300-watt plant, called the Little Husky, is the latest production and is in some respects an innovation in the field. The manufacturers claim for the generator of the Little Husky, a 300-watt continuous rating. That is to say it will carry a load of fifteen 20-watt lamps indefinitely without the aid of the reserve in the battery. Its maximum capacity independent of the battery is 450 watts, a supply for 2-watt lamps.

The 60 ampere hour Willard storage battery can furnish 210 watts for 8 hrs. Therefore it will supply ten 20-watt lights for 8 hrs. or three 20-watt lights for 30 hrs. The voltage of the Little Husky supply is 32 volts.

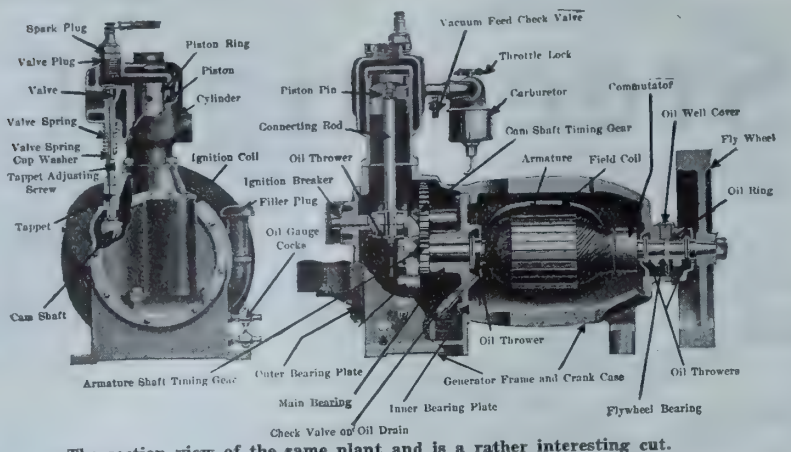
A gasoline consumption of less than one pint per hour at full load is claimed for the Little Husky engine which means that the cost of operation is less than 1/5c per hour for each 16 c.p. lamp. This estimate is based on the assumption of 25c per gallon as the cost of gasoline.

The weight of the plant, tank and battery complete, is about 700 lb., and the space occupied by plant and tank measures approximately 4 ft. long, 2½ ft. high and 1½ ft. wide.

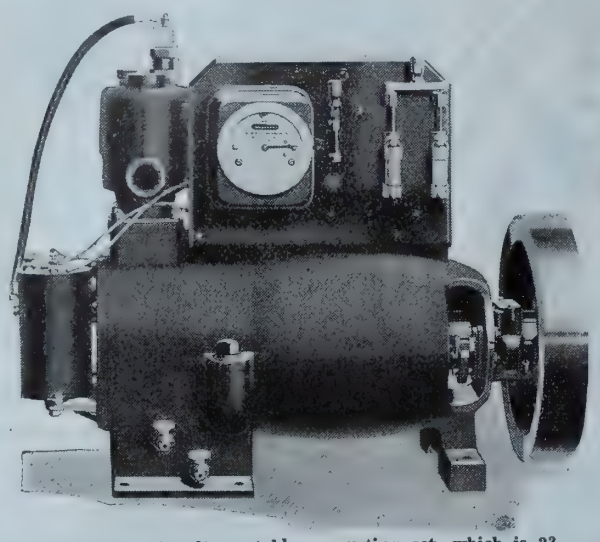
The 300-watt and 1-kilowatt plants are driven by one-cylinder engines, the 2-K.W. plant by a two-cylinder engine and the 5, 10 and 15-K.W. plants by four-cylinder engines.

The 15-K.W. plant supplies 750 20-watt lights at 110 volts, the 10-K.W. plant 500 lamps at the same voltage, and the other sizes in proportion to their rated capacities. The 300-watt and 1-K.W. plants run at 32 volts and the others at 110 volts.

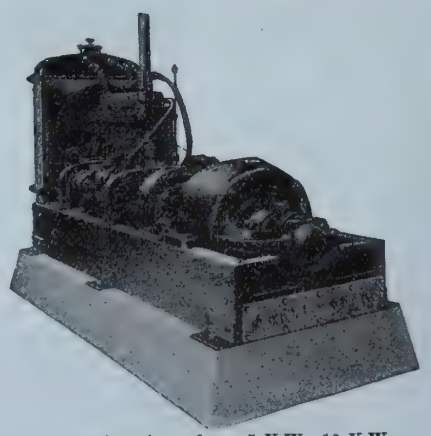
These engines are manufactured by the Matthews Engineering Co., the generator by the General Electric Co., and the batteries by the Willard Storage Battery Co.



The section view of the same plant and is a rather interesting cut.



The 300 watt, 32 volt, portable generating set, which is 23 inches long and 20 inches high.



A perspective view of our 5 K.W., 10 K.W., and 15 K.W. plants.

STEWART WIRE WHEEL

IN the newly perfected Stewart Wheel, made by the Stewart Wire Wheel Corpn., of Frankfort, Ind., all danger of wheels accidentally coming off is claimed to be eliminated. The inner hub and outer hub each have four reverse tapers. As the outer hub is applied, the tapers slip into grooves, and a one-eighth turn locks the reverse tapers of the outer hub to those of the inner. Each taper has bearing on the entire surface of the other. Even when the tapers begin to wear down, perfect surface is maintained until both reverse tapers are entirely worn away. This is beyond the realm of possibility, however, as it would require years to cause that amount of wear, since all friction is eliminated.

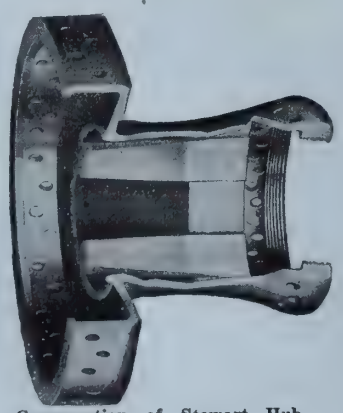
Until the reverse tapers are automatically locked in correct position, the hub cap cannot be applied. Inside this hub cap is swiveled a wedge key with four tapered wedges. This wedge key has two functions. It carries the wedges for securing the wheel upon its taper bearings. At the same time, the end of the inner hub projects into the wedge key, which in turn reposes in the recess in the hub shell, thus providing a positive, direct drive combined with rigidity of wedge bearings.

When the correct contact of the reverse tapers is secured by the one-eighth turn of the outer hub, recesses opposite each other in the two parts of the hub create definite slots into which the tapered wedges of the wedge key are seated. Unless the two parts of the hub are in exactly the right position, these wedges cannot enter the slots provided for them. Turning the hub cap forces the wedges home, and they are held in place by an automatic spring lock ratchet mechanism. Two or three final turns with a hub wrench make the hub cap absolutely tight and the spring lock prevents its working loose.

In the hub cap of the Stewart Wheel all threads are right hand threads. The left hand threaded hub cap is eliminated. It is, therefore, impossible to put a hub cap on the wrong side of the car where it will immediately work loose, come off and throw the wheel when the car is running at speed.

Stewart Wire Wheel.

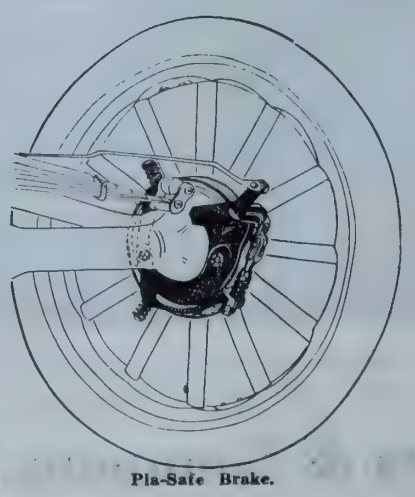
Sterling Polarity Indicator



Cross-section of Stewart Hub, showing how reverse tapers lock.

Inner Hub of Stewart wheel, showing reverse taper construction.

Stewart hub-cap in cross-section to show the tapered wedges and the ratchet lock which prevents hub-cap from working off.



Pla-Safe Brake.

POLARITY INDICATOR

THE Sterling Polarity Indicator is for testing individual storage battery cells and is designed especially for manufacturing and repair work. There is no chance of connecting cells up to wrong terminals. These instruments are ideal for rapid and accurate polarity testing. The long terminals, three inches apart at the extremities, can be adjusted to fit all cell terminals by bending them nearer together or farther apart. The decided action of the sensitive indicator hand and the plain, clear-cut, dial, therefore, make it easy for a workman to test the cells with one hand, while placing them in proper position for connection with the other. Speed and accuracy are afforded at little cost. The efficiency attained makes these little instruments indispensable to service stations, as well as to storage battery manufacturers and electrical repair men.

Directions for use of Polarity Indicator: Apply the two legs of the instrument to the poles of a cell or connect them to wire leads. When the instrument is thus placed in contact or connection with a cell or battery, if the pointer moves to the right, or side market + on the dial, the right or positive leg of the instrument is in connection with the POSITIVE pole of the cell or battery. If the pointer moves to the left or side marked — the right or positive leg is in connection with the NEGATIVE pole. Manufacturers: Sterling Manufacturing Co., 321 Frankfort Ave., Cleveland, Ohio.

PLA-SAFE BRAKE

THIS is a large brake easily attached to the rear hub drum, lined with best of lining. It has a two-point spring suspension, and is guaranteed not to rattle or drag. The manufacturers, Pla-Safe Brake Co., Brookville, Pa., claim it is light in weight, easy to install and make a point of the fact that it has no holes to drill. It is devised to act as a brake on a Ford when the emergency brake is worn.

FIRE EXTINGUISHING COMPOUND

A NEW fire extinguisher especially for garage use has been placed on the market by the United States Fire Extinguisher Co., Syracuse, N.Y. Unlike most other extinguishers, this article has no mechanical parts but consists of a chemical compound put up in a strong fibre casing immediately available for any emergency. When this compound is thrown on a blaze it generates a harmless but effective flame-smothering gas that instantly puts out the fire. It is said to be especially efficacious on all gasoline, oil or grease fires and is warranted not to injure the finish of the car or other parts as the chemical can be dusted off after having extinguished the fire. The article sells for $2.50 or $2.75 complete with metal spring bracket for attaching to the footboard.

Fiat Tractor Invades Canadian Field.

FIAT TRACTORS

THE FIAT COMPANY, Limited Turin, Italy, one of the largest automobile concerns of Europe, has engaged in the agricultural tractor line, announcing that it will do business in Canada. They have placed on the market a new machine of their own design. The machine is remarkably simple, very "clean" in design, and provides the utmost protection for all working parts. The frame of the tractor comprises three main castings, as follows; an upper and lower half engine base chamber, and a big housing containing the clutch gears, differential, worm gearing and drive shafts. This housing is carried on two big diameter driving wheels at the rear, and at the front is attached to the axle and smaller diameter wheels by means of a transverse semi-elliptic spring. This arrangement gives a three-point suspension for the entire unit, and also encloses all working parts, without, however, there being any loss of accessibility.

The engine is practically the same model as used on the Fiat 3½ ton lorries. The four cylinders, with valves on one side, have a bore and stroke of 3.9 by 7.08 inches. The crankshaft is carried in three plain bearings, and pump and magneto are driven off a transverse shaft at the front of the motor. The gas passages are cast integrally with the cylinders. The carburetor is designed to give it an intensive heating so that kerosene may be used instead of gasoline. This latter fuel is only made use of for starting; once the engine has been warmed up it is run on the cheaper fuel.

The steering is of the automobile type and the change speed lever is on the driver's left. Rear wheels are all-metal type, fitted with detachable strokes. Front wheels, which are also metal type, have a diameter of 32 inches and a width of 5 inches.

In public tests the tractor showed an ability to plow 17,000 square yards of very heavy ground per day. It is suitable for haulage over ordinary roads and is equipped with tow hook and chains. It is also suitable for operating any kind of agricultural machinery. The total weight is 5,730 pounds; maximum height 75 inches.

OTTAWA ORGANIZES AUTOMOTIVE ASSOCIATION

THE Automotive Trade Association of Ottawa was definitely organized at a large and enthusiastic meeting of the allied trades in Ottawa. The attendance consisted of upwards of thirty-five men representing the automobile, tire, accessory, tractor and aeroplane trade interests of the city and district.

The representatives were unanimous in their views regarding the need for co-operative activities and it was also agreed that the organization could carry out various features to boost the community and the district as well as trade interests.

The official name of the new organization is "The Automotive Trade Association of Ottawa," and this name covers all branches of the allied industry. A motion to organize separate sections for the respective branches was voted down, the rejection of this proposal being practically unanimous. There is a possibility that the new organization will become affiliated with the Retail Merchants' Association in the near future, but this question will be given more consideration. The "A.T.A." is not opposed, in any way, to the Retail Merchants' Association, but the subject of an alliance will come up for further consideration.

Officers were elected to a number of posts, the permanent chairman of the organization being W. M. Gladish, Automotive Editor of The *Journal*. The vice-chairman is S. C. Cooke. The secretary-treasurer, selected provisionally, is William McDonald, Chairmen for the various committees were elected as follows: Grievance—G. J. Doane, Canadian General Electric Company; Features—Corliss Keyes; Entertainment—J. G. McGuire; Rules and Regulations—George Pink, of Pink and Blackburn Publicity and Advertising—D. G. McGowan of the Dixon Motors (Ottawa), Limited.

FORD STEERING DEVICE

A NEW Ford steering device, which has met with big success in the United States, is now being manufactured in Canada, and distributed by the McKenzie, Crews Co., Richmond Buildings, Toronto. The principle is that the Ford direct drive is converted to a worm drive, and the strain of gripping the steering wheel, particularly noticeable on a rough road, is said to be entirely eliminated.

It is also said that it will minimize the danger of the car swerving on rough roads; economizes on gas; save stires, reduces rattles, and saves on repairs. Consumer price is $3.75.

VARIOUS "CASE" CO.'S

THE J. I. Case Threshing Machine Co. has issued a circular to the trade, pointing out that it is not, nor has it been, in any way connected with the J. I. Case Plow Works, the J. I. Case Plow Works Co., or the Wallis Tractor Co.

W. H. HAGGARD RETIRES

AFTER forty-eight years in the implement, thresher and tractor business, W. H. Haggard, division sales manager of the Emerson-Brantingham Company, of Rockford, Illinois, has retired.

Easy to Clean
Chaff and straw and particles of dust and feed are bound to collect in my water bowl. This fact, however, presents no difficulty when the farmer has BT Bowls. He can clean the BT Water Bowl in a moment simply by removing the little clean-out plug in the bottom of the Bowl.
This is one of the principal advantages of the BT Bowl and makes it popular with farmers. For further information write our nearest branch.
Beatty Bros., Limited
Winnipeg, Man., Fergus, Ont., Montreal, Que.
Edmonton, Alta. London, Ont., St. John, N.B.
16 Holborn Viaduct, London, England
Water BT Bowls

Grinder with Elevator and Bagger

"VESSOT" FEED GRINDER

POPULAR WITH DEALERS AND USERS EVERYWHERE

Dealers make a good commission on "Vessot" Grinders and they are never bothered with complaints because the "Vessot's" good service is consistent and reliable.

We make nine different sizes of grinders: 6½", 8", 9", 9¼", 10½", 11" B Farm Type and 11", 13" and 15" Mill Type, or in other words, we build a machine to meet all requirements.

Write the nearest branch of the International Harvester Company for Agency proposition. It's well worth while.

We challenge the world to produce plates that will grind and wear with genuine "Vessot."

INVENTORS AND MANUFACTURERS

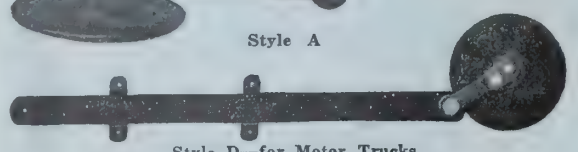
S. Vessot & Co., Joliette, Quebec

Sold exclusively in Canada by
International Harvester Co. of Canada, Limited.
Branches: Calgary, Edmonton, Lethbridge, North Battleford, Regina, Saskatoon, Yorkton, Brandon, Winnipeg, London, Hamilton, Ottawa, Montreal, Quebec, St. John.

Hindview AUTO MIRRORS

C Bracket for Closed Bodies

Style A



Style D—for Motor Trucks

Style A—Long

Style F for Front Fenders

The "Hindview" Auto Mirror prevents accidents by enabling the driver to keep an eye on the rear traffic without losing sight of the road ahead. Our Ball Joint allows immediate adjustment to any desired angle without the use of any tool.

Substantially made — nicely finished — has five inch plain, or lens, plate glass mirror. The lens mirror increases the field of vision about 50 per cent. without distorting the view. Note large, firm clamp for attaching to windshield.

Write for our folder showing complete line

Agents, Jobbers, Write for our Proposition

Superior Quality KALES STAMPINGS *Prompt Deliveries*

PRESSED METAL PARTS, LIGHT AND MEDIUM WEIGHT STAMPINGS

Our complete plant, superior equipment and efficient organization are at your service. You will insure satisfactory results by letting us make your stampings. Motor, axle, transmission and clutch stampings. Write to-day enclosing blue prints or samples for estimates and our catalog.

KALES STAMPING COMPANY

446 West Lafayette Blvd. Detroit, Michigan

Mr. Dealer!

IF

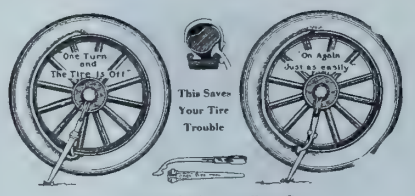
Price
Quality of Material
Workmanship
Close Skimming
and
Easy Turning

are considered by your customers in buying a Cream Separator, then we claim that the

Sanitary King

is the best buy in Canada to-day. Write for prices and terms.

King Separator Works of Canada
Limited
Bridgeburg or Whitby, Ont.



DEALERS

The Case Tire Tool is

The Fastest Selling Auto Necessity

Liberal Profits. Quick Returns.

Order from 2 to 5 dozen to-day from

YOUR JOBBER

and write us for circulars and display advertising matter

Free Demonstrating Stand to all dealers ordering ten dozen or more at one time.

Seven jobbers in Winnipeg and several in Toronto, etc., handle the new and wonderful

CASE TIRE TOOL

Motor Necessities Co. of Canada
231 Somerset Building, Winnipeg, Man.

SAYS THE MASTER MECHANIC: The Greb Automatic Grip Puller is a One-Man Puller — Quick-acting, strong and simple in the extreme. May be locked in any desired position. A combination of two or three arms. Heavy Duty Size capacity 1" to 18"—Junior Size capacity 1" to 7". Two sets of jaws furnished with each size.

TEN DAYS' TRIAL. — If your dealer or jobber does not have them we will send you one. Try it ten days. If not satisfactory, return to us and we will refund your money. We also make the GREB RIM TOOL.

THE GREB COMPANY, 319 State St., BOSTON

Dairy *and* Household Supplies

A MILKING MACHINE

THE farmer gives herewith his experience with a milking machine:

It used to take me just about two hours to milk my eighteen cows. That meant four hours, counting night and morning, sitting on the milking stool, the best I could do. Last winter was unusually cold, and I actually frosted my feet in the stable, working there so long at a stretch with little chance to move them around.

Being faced with another winter of like experience, on account of the lack of help, I determined to put in a milking machine. The original cost of the machine was $300, but by turning in a separator that we were no longer using, I was able to get the milker by paying $200 in cash.

The machine shortens the work of milking about one-half, which counts in the short days when chores take such a large part of the time. That gives me a better chance to work at other winter work, such as getting up wood.

I made a pulley out of a round stick of wood and attached it to the driving shaft of the milker, so that by gearing it to the grindstone we could sharpen the mowing-machine knives, grind the scythes, axes and other tools with the same source of power. Altogether I find that the machine enables me to do without help that I would otherwise have to keep through the winter months.

OPERATED BY CHILD

CREAM separators are now becoming so simple in construction, that even a child can operate them. In the accompanying illustration is shown little Miss "Dairymaid" standing by an up-to-date separator. She has reached the important age of four; and as she enjoys turning the separator crank, is always on hand at milking time on her father's farm.

She operates the separator.

SILAGE FROM SHOCKED CORN

EVERY fall some people are delayed in getting their silos completed in time to fill directly from the field. In such cases, they can cut and shock their corn and put it into the silo later.

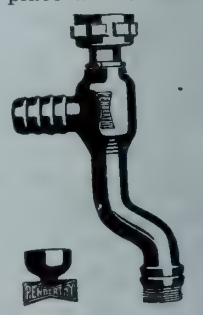
Opinions of men who have used silage made of shocked corn: (1) It is a satisfactory feed and animals find it more palatable and appear to do better on it than when fed shock corn. (2) Silage made in this way is not equal to that made by putting corn into the silo at the proper stage. (3) Refilling the silo in the middle of the winter with corn fodder prevents the loss in feeding value which occurs when fodder is left in the shock. (4) it is more convenient to feed them from the silo than from the shock. (5) Cattle eat more of the stalk in the form of silage.

It is doubtful if putting dry corn fodder into the silo will ever become a general practice on account of the large amount of water required to put it in proper condition. When a silo is not completed in time this plan is recommended.

Perhaps a suggestion for a summer silo would be a good one to such farmers.

WASHING MACHINE EJECTOR

A WASHING machine ejector for household use is being manufactured by the Penberthy Injector Co., Ltd., Windsor, Ont. The manufacturers state that the device is designed to transfer water or other liquids from pumps, washing machines, wash tubs, cellar pits or any place where there is an accumulation by means of ordinary water pressure. No electrical, steam, or other operative power is required. The ejector takes the maximum amount of water from the tub or pump with the minimum amount of water operating the ejector. It is a very handy device to have around the house, saving much back straining and lifting. The ejector is made of aluminum, has no loose parts and nothing to get out of order, does its work quickly and efficiently, and will last a life time.



BITTER MILK

IF bitterness develops in milk after it is drawn, which is often the case in fall and winter, the trouble is due to the growth of bacteria, which usually get into the milk from pieces of dirt or manure from the barn. When the dairy is once infested with such bacteria they may remain in the separator, strainers, pails or cooling tank for a long time. To prevent bitterness due to this cause, all utensils, separator parts, strainers and cooling tank must be thoroughly washed and scalded. A pail with a small opening should be used at milking time.

SOME CALF; SOME WATCH

SEVERAL years ago a farmer living west of this city hung his vest on a fence in the barnyard. A calf chewed up a pocket of the garment in which was a standard gold watch. Last week the animal, a staid old milch cow, was butchered for beef, and the timepiece was found in such a position between the lungs of the cow that the respiration—the closing in and filling of the lungs—kept the stem-winder wound up, and the watch had lost but four minutes in the seven years.—*Kansas City Star.*

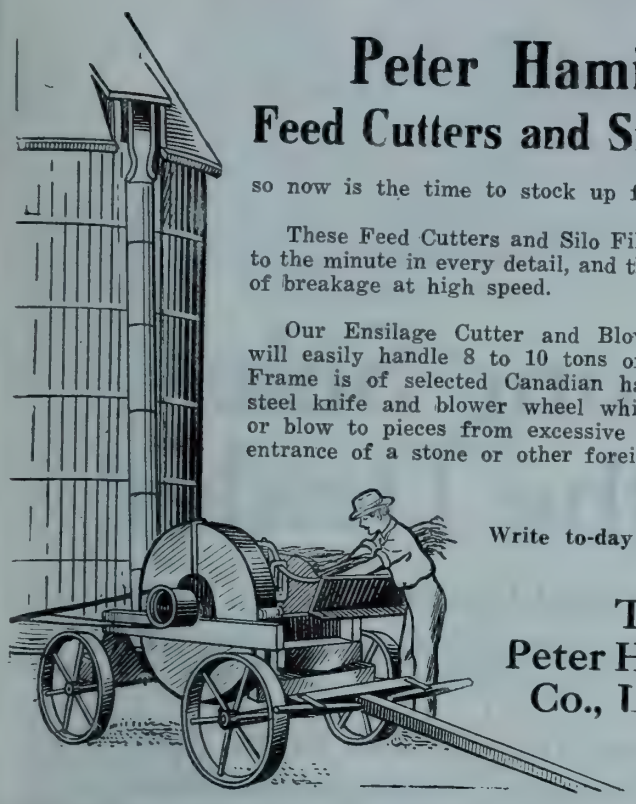
ALFALFA BALER

BY using the baler in handling the surplus alfalfa crop, farmers of the alfalfa-growing sections not only receive a higher price for their crop, but find it easier to handle the crop. No matter how large the acreage or how high quality the alfalfa may be, profits depend upon preparing the crop for market in the most attractive form.

Every Implement Dealer Should Know

that Peter Hamilton Machinery has won such a reputation for itself among farmers throughout the country that it is a sure and quick-selling line to handle.

There is a particularly brisk demand at present for



Peter Hamilton
Feed Cutters and Silo Fillers

so now is the time to stock up for real business.

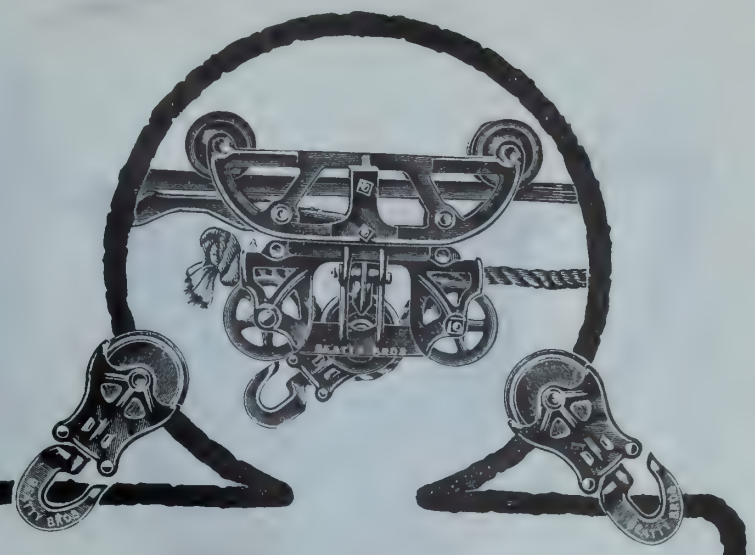
These Feed Cutters and Silo Fillers are right up to the minute in every detail, and there is no danger of breakage at high speed.

Our Ensilage Cutter and Blower (illustrated) will easily handle 8 to 10 tons of corn per hour. Frame is of selected Canadian hard maple. Has steel knife and blower wheel which cannot break or blow to pieces from excessive speed or by the entrance of a stone or other foreign substance.

Write to-day for particulars.

The Peter Hamilton Co., Limited

Peterborough Ontario



Bale Pulley Swings Freely

The Bale Pulley of the Maple Leaf Carrier swings freely. The grappling hooks of the carrier engage with the rim of the sheaves and allow the load to swing freely on the bale pulley axle. This enables the farmer to draw a load over high beams or into the mow when it is nearly full without tipping the carrier or injuring the bale pulley. This is only one of the numerous points of advantage of the Maple Leaf line of Hay Carriers. For further information, write to—

BEATTY BROS., LIMITED

Winnipeg, Man. Fergus, Ont. Montreal, Que.
Edmonton, Alta. London, Ont. St. John, N. B.
16 Holborn Viaduct, London, England

Hay BT TIME SAVER **Cars**

Mr. Dealer---

With the winter will come a demand for sawing machines.

Be Prepared

to make a good profit by getting the agency for DORÉ SAWING MACHINES.

Bull-Dog Drag Saw Machine

(PATENTED)

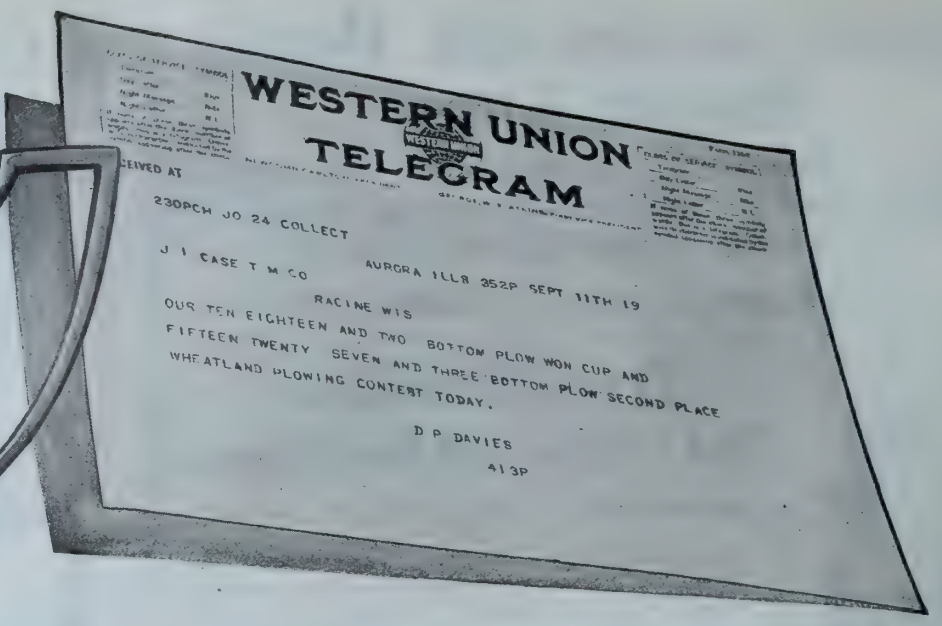
This machine is built in two sizes, 9 ft. and 6 ft. respectively by 3 ft. 3 inches wide overall, with steel table, strong and durable, for use with engine and horse powers. Saw 24 to 30 inches.

Long Swing Circular Saw Table

The most simple drag saw machine ever built. Only one lever is used to start and stop the machine and feed the log to the saw. This simplicity, together with the rugged construction, will appeal to every prospective customer.

WRITE US FOR FULL PARTICULARS RE AGENCY PROPOSITION TO-DAY.

J. B. Doré & Son
Laprairie, Que.


WESTERN UNION TELEGRAM

230PCH JO 24 COLLECT

J I CASE T M CO AURORA ILL8 352P SEPT 11TH 19
RACINE WIS

OUR TEN EIGHTEEN AND TWO BOTTOM PLOW WON CUP AND
FIFTEEN TWENTY SEVEN AND THREE BOTTOM PLOW SECOND PLACE
WHEATLAND PLOWING CONTERT TODAY.

D P DAVIES
413P

Illustration above shows Case 10-18 Kerosene Tractor pulling 2-bottom Grand Detour Plow; winning combination at the Wheatland Plowing Contest.

NOTICE
"We want the public to know that our plows are NOT the plows made by the J. I. Case Plow Works."

CASE
KEROSENE TRACTORS

Winning Sales for the Dealer

Here's how Grand Detour Plows and Case Kerosene Tractors are piling up prestige for the profit of the Case dealer.

On September 11th, the 41st annual contest of the Wheatland Plowing Association was held near Aurora, Ill. In a field of twelve contestants, the Case 10-18 Kerosene Tractor, with 2-bottom Grand Detour Plow, took first place and the silver cup illustrated.

Second place was won by Case 15-27 Kerosene Tractor pulling 3-bottom Grand Detour Plow.

The judgment of the practical, tractor-wise farmers who conduct these contests can be accepted as business gospel by every dealer in agricultural machinery. Their endorsement of the superiority represented by the famous Case trade mark of the Eagle on the Globe, means not only a minimum of sales resistance, but a maximum of Case selling arguments, furnished by the farmers themselves.

This established reputation of Case Kerosene Tractors is backed by aggressive advertising in agricultural papers.

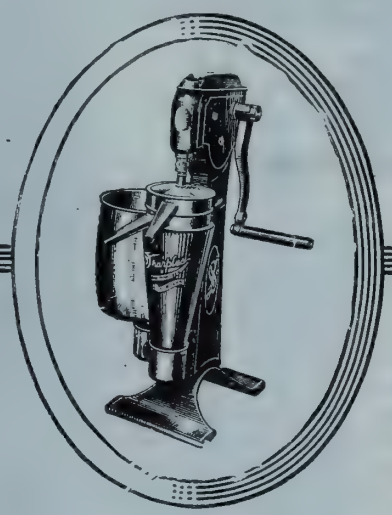
If you are a Case Dealer,—you know Case service. If you want to be a Case dealer—*learn about it.*

J. I. CASE THRESHING MACHINE COMPANY, Inc.

Dept. O , Racine, Wis., U. S. A.

Making Superior Farm Machinery since 1842

The *value* of the Sharples dealer's contract is greater to-day than ever before---mainly because both the Sharples Suction-feed Separator and Sharples service to dealer or user are far ahead of anything offered by manufacturers of the old style, fixed-feed machines. That is why Sharples dealers are selected with care.



There are no Substitutes for Dairy Foods

Help to Make Dairying North America's Greatest Industry

SHARPLES SUCTION-FEED CREAM SEPARATOR

Skims Clean at Any Speed

No other separator manufacturer could put into five words or *fifty* words, as convincing an argument as "Skims clean at any speed." They tell the farmer about the durability of their separator, that it is well known, that it costs less and everything else *but* the *one* big reason for purchasing a separator---to get *all* the butterfat out of the milk. Sharples *also* has the exclusive advantage of no discs in the bowl; knee-low tank; once a month oiling system; durable construction and, besides, it is the pioneer North American Separator.

It is profitable, indeed, to handle the separator backed by provable sales points, such as outlined above. These points are constantly being placed before Dairyman through Sharples National Advertising.

THE SHARPLES SEPARATOR CO.

TORONTO, ONT.
REGINA, SASK.

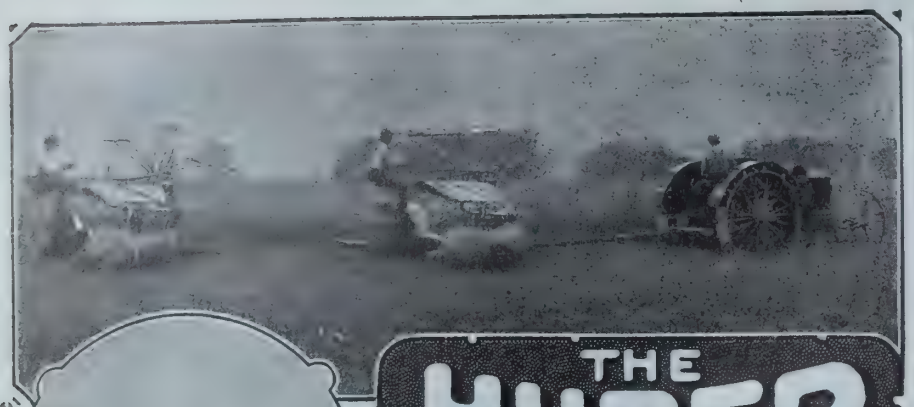
THE LOUNSBURY CO.
NEWCASTLE, N.B.

Distributors through all their Branches

"Over 2,425,000 Sharples Separators in Daily Use"

J. CLARK & SON
FREDERICTON, N.B.

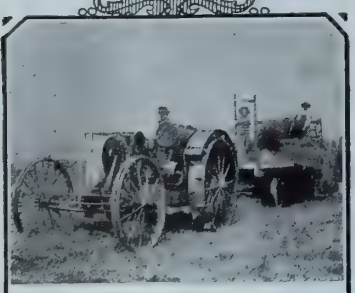
P-83



THE HUBER Light Four

Sell a Tractor that Has Made Good!

The Huber is so simple and easy to handle that 10-year old boys and women have plowed successfully with it and done the work of 4 men and 12 horses. Anyone can learn to drive it in a few minutes. It is simple to keep in repair.



The Huber does many kinds of belt work, harvesting wheat, cutting and loading hay, harrowing and hauling.

After plowing has been done the seed bed can be prepared with a Huber Light Four as it will work on ploughed ground without packing it down.

The Huber Light Four will operate a corn husker or corn shredder, a hay baler, ensilage cutter, wood saw or small thresher, and do many other kinds of belt work.

THERE are big advantages for any dealer who sells the Huber Light Four Tractor.

He sells a tractor with an international reputation—one that has made good for thousands of farmers and has the good will of enthusiastic owners behind it.

He sells a tractor made by men who have twenty years of tractor building experience to bank on—who have built tractors of many types and sizes—and who *know* the tractor business.

He sells a tractor which has been made in the same model for several years so that all the uncertainties involved in a new design have been removed.

In the Huber Light Four he has the utmost simplicity in tractor design—direct drive to belt and all-spun-gear to drivers—minimum number of parts, perfect balance.

It is a tractor that is most economical of fuel and has over and over again shown its ability to get more work out of every gallon.

In short, the Huber Light Four minimizes the operating troubles of the owner and the service troubles of the dealer.

Depots in leading agricultural centres supply either complete tractors or parts promptly.

Strong advertising and merchandising policies back up the dealer's sales efforts—policies that have been successful in the farm implement field for 40 years.

When you sell the Huber you associate your business with a proven success. The pioneering work has been done. You begin **real business** at once.

The Barkley Tractor & Separator Company
Edmonton, Alta.

The Huber Manufacturing Company
Brandon, Man.

The Huber Jr. Thresher and the Huber Light Four are made by the Huber Manufacturing Company, Marion, Ohio, U.S.A.

LAUSON 15-30 TRACTOR

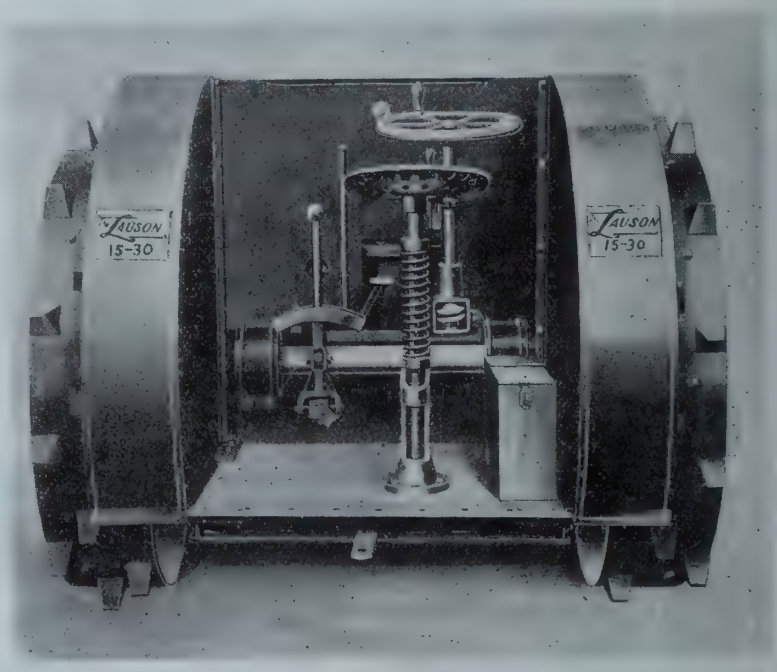
THE new tractor placed on the market by the John Lauson Manufacturing Co., New Holstein, Wis., has several distinctive features.

The engine used in the 15-30 tractor is the valve-in-head type, with 4¾ in. bore, and 6 in. stroke. This new engine is equipped with gear driven fan, replacing the belt drive, and thus eliminating the troublesome loose fan belt feature.

Another new feature is the Sylphon Thermostat. This permits water to circulate through the pump, and the water jackets around the cylinders, allowing the motor to reach quickly a temperature of 160 to 180 degrees.

The Siphon Air Washer is also new, having no cloth or felt screens to clog with dust. Its construction prevents air streams passing through the water in large bubbles.

The front wheels are mounted on Timken bearings. The platform, which is spacious, with operating levers conveniently located, is a solid "bed" plate which will not work loose, and is built low to the ground, allowing the operator to step off and make adjustments. The Lauson tractor is distributed in Canada by the De Laval Company, Peterborough, Ont.



Lauson 15-30 Tractor.

OLD NUMBER ONE

THE Advance-Rumely Thresher Company caused quite a sensation at a recent demonstration, by exhibiting "Old Number One"—the original Oil Pull Tractor built by them. This veteran machine was driven in the field demonstrations alongside the newer types and performed splendidly.

"Number One" left the Laporte shops in 1909, and has seen ten years of continuous service, during which time it has plowed 1,750 acres of wild sod, 5,600 acres of stubble ground, and has 321 days of threshing to its credit. It has furnished the power to thresh three-fourths of a million bushels of wheat.

It was borrowed for the demonstration from the owner, Frank Schultz, of Agar, South Dakota. The owner says of his experiences with the pioneer oil puller:

"I have done more work with my 25-45 Oil Pull tractor, than any other engine around this part of the country. It works better, and will pull a bigger load on kerosene than on gasoline. Many a time. I have had 'Old Number One' running on heavy load all day without a stop, and she never overheats. She hasn't missed a season, and she's taken the jobs as they came—plowing up wild prairie, plowing stubble, handling a threshing run every year, some road building on the side, and miscellaneous power jobs."

The record of the veteran, "Old Number One," proves a very important point, namely, that a tractor *can* be built to give dependable service, day after day, and year after year. After the demonstration, "Old Number One" was returned to its owner at Agar, S. Dak.

NEW FORD SETTLERS

WINNIPEG.—Mechanics in the Ford factory in Detroit, Michigan and other large factories and shops are anxious to come to Canada and settle on the land, according to B. Westcott, immigration agent of the Grand Trunk Pacific, who just returned from a two months' trip through the states in connection with Canadian exhibits being shown at the various fairs throughout the states.

Mr. Westcott said that these men have a certain amount of capital saved, owing to the high salaries paid in the plants during the war, and they are anxious to invest it in Canada. The men say that living conditions are so discouraging in the large towns that they want to go back to the farm.

"Old No. 1"—turned out of factory in 1919—and still "going strong."

MOLINE
UNIVERSAL TRACTOR

Photos taken at the Ottawa and Chatham Tractor Demonstrations

CANADIAN DISTRIBUTORS:

Willys-Overland, Ltd., Toronto

Made by MOLINE PLOW CO., Moline, Ill.

Moline Tractor Successfully Demonstrated At Chatham and Ottawa

Once more the Moline has proved its real economy and value. At the Chatham and Ottawa demonstrations, in plowing, discing, harrowing and other tests—the Moline Tractor proved its ability to more than meet the demands of Ontario farmers. So clearly was this shown at Chatham that both the demonstrating machines were sold during the day.

Why are Ontario farmers turning down other tractors in favor of the Moline-Universal?

Because the Moline is a one-man outfit.

Because the Moline does more work.

Because the Moline costs less to operate.

Because the Moline gives more years of service.

The Moline-Universal plows fast and plows well. The operator sits on the implement—where he should sit to do good work. He can back into corners. He can make short turns. He can plow on schedule and take advantage of good weather. He gains just as much time in discing and harrowing.

He can do his seeding and cultivating with tractor speed and efficiency.

All the year round he has power available—for harvesting and haying, threshing and silo-filling, and for other belt work.

For fuel and oil the Moline costs less. The Moline starts easily—has an electric starter.

With a perfected overhead-valve, four-cylinder motor; with Hyatt roller bearings, with all moving parts enclosed; with motor up out of the dust; with gears running in oil; there are more years of service in a Moline.

We have a number of interesting books about the Moline. They are free. Send your name and address.

NEVER-SLIP TRACTORS

MONARCH TRACTOR

THE MONARCH TRACTOR was the only tractor pulling a five furrow plow at the Provincial Plowing Match at Chatham.

THE MONARCH TRACTOR will travel over soft, wet or loose lands where work animals or a round wheel tractor cannot operate.

It will do work in the Early Spring when the ground is wet or dry, on high or low ground. It will work where any other tractor can operate and where many of them cannot. It does not pack the soil.

For plowing, for operating heavy feed cutters, silo fillers, threshing machines, hay balers, stone crushers. Hauls binders, mowers, wagons, manure spreaders. Works 24 hours a day as it can be equipped with Electric Lights at a small extra cost.

Its mighty pulling power in the field and the way it stands up to heavy work at the belt will convince you it's the only tractor you can afford to buy at any price.

DEALERS

MONARCH TRACTORS stay sold. Your territory may be open. Write us for terms.

Monarch Tractors Limited, Brantford, Ont.

News OF THE TRADE FOR THE TRADE

(*See also page* 38)

MANITOBA

BOISSEVAIN.—E. T. Johnson has added complete auto accessories line to his hardware business, also electric fixtures and Delco Lighting System.

MINTO.—J. B. Johnson, hardware merchant, has added to his business, automotive and implement accessories. He will also handle lighting plants and electric fixtures.

WINNIPEG. — The Elmwood Machine Company have received a permit to build a garage on the corner of Hespeler Ave. and Elmwood Street. It will be 62 feet wide and 100 feet long and will cost $10,000.

BOISSEVAIN.—The garage recently opened by Messrs. Truax and Aylesworth has been closed, and the partnership dissolved. Mr. Truax is leaving the district, while J. H. Aylesworth will devote his entire time to the Tractor and Implement business.

SOURIS.— Messrs. Milne and Buchanan, returned soldiers, have opened an up-to-date garage under the name "Souris Motor Co." They run a vulcanizing plant in connection and handle all repairs and accessories. They are having good support and doing good business.

WHITBY.—The Nash Motor Company intend to establish a Canadian branch here, for the manufacture of some motor parts, and for the assembling of cars for the Canadian and British markets. A tract of about 60 acres has been selected as a likely spot for such an undertaking.

WINNIPEG. — The Good Roads Board decided recently to construct 277 miles of good roads, at a cost of $675,000, in Manitoba. The work will begin next spring. This will bring the mileage of good reads constructed under the Manitoba Good Roads Act to 3,758 and total expenditure to $8,219,000.

QUEBEC

LEVIS.—Chas. Castonguay has received permit to build a garage and store costing $12,000.

MONTREAL.—The Annual Automobile Show, under the auspices of the Montreal Automobile Trade Association, will take place in February, 1920. A. Levesque, secretary.

MONTREAL.—The Carriage Factories, Limited, may in 1920, extend the carriage and automobile end of its business. Besides controlling the Canadian Briscoe Co., it is equipped for the manufacture of bodies for the entire Canadian trade.

MONTREAL.—J. O. Lintou, president of the Montreal Automobile Trade Association, has left for New York, where he will board the Caronia for Europe. He will especially visit the Grand International Automobile Exhibition at Paris.

QUEBEC.—By the end of 1919, it is estimated there will be nearly 40,000 automobiles in the Province, which will mean an increase of 14,000 over figures for 1918. When this is compared with 254 cars for 1907, it can easily be seen how rapid the growth of the motor industry has been.

H. M. VIGNEUX PROMOTED

So rapidly has its business expanded in Quebec, that the Renfrew Machinery Co. has announced the opening of a branch in Montreal, under the management of H. M. Vigneux, who is thoroughly experienced in the trade. He

H. M. VIGNEUX
Renfrew, manager for Quebec Province.

was born the year of Confederation, in Windsor, of French parents, and early in life engaged in business with the Deering Harvester Co. Since then he has had experience in the Argentine, and has been with the I. H. C., Heney Carriage and Harness Co., and McLaughlin Motor Co.

MARITIMES

TRURO, N. S.—Fulton and McLean, vulcanizers, have remodelled their office and show room.

DARTMOUTH, N. S.—Gerald Foot, proprietor of Foot's Chevrolet Service Station, specializes in Chevrolet cars and accessories of all kinds. He has enlarged his premises owing to increasing business.

HALIFAX, N. S.—The 1919 Maritime Pure Food Show, manufacturers' Exhibition and Automobile Show was formerly opened Oct. 13th, by Lieut.-Governor Grant. The entire floor space of the building was occupied by rows of booths; there were over 150 exhibitors.

SUSSEX, N. B.—A fire totally destroyed a large warehouse belonging to the Sussex Manufacturing Co. In the building was stored a number of threshing machines and other goods, the property of the Wallan Machine Works. The Sussex Manufacturing Co. had also coonsiderable stock there. The loss, which is partly covered by insurance, is estimated at about twenty thousand dollars.

The Monarch Tractor was the only one at Chatham, Oct. 21-23, to pull five plows.

The "Essex"

Tractor at CHATHAM

IN the big tractor plowing competition at Chatham on October twenty-third there were 25,000 practical farmers who saw the Essex 15-30 complete its land first.

The 15-30 is the larger of our two models. The 10-20 pulled three plows just the day before.

The Essex Tractor Company is an all Canadian concern making an all Canadian product.

We also manufacture a 1½ ton worm drive truck and will shortly begin turning out trailers.

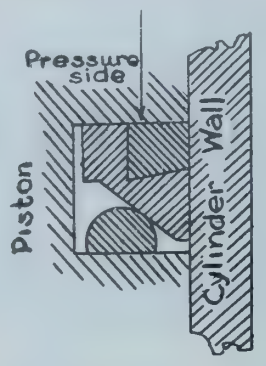
Essex Tractor Co., Ltd.

ESSEX - ONTARIO

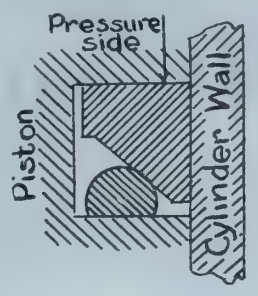
Why Pressure Proof Rings Hold Compression

They expand in the groove as well as in the cylinder.

They prevent or cure overoiling.



1 Pressure Proof 3 part ring per piston is suffieient.

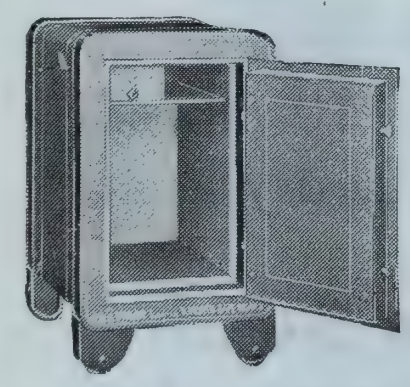


2 Junior or 2 part rings form a set.

Now manufactured in Canada by

PRESSURE PROOF RINGS, LIMITED
SHERBROOKE, QUE.

Office : Room 5, Sun Life Building



Protection for Your Victory Bonds, Sales Notes, etc.

The Farmer's Safe

With one of our specially constructed cabinets with combination lock, your money, valuable papers and documents are far safer than when locked in your desk or placed in a drawer.

Every farmer needs one of these Made-in-Canada cabinets. They afford you an assurance of safety from loss.

DEALERS—This is a splendid opportunity for implement dealers. Write for prices and full particulars at once.

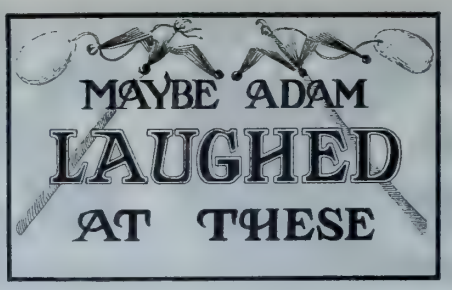
J. & J. Taylor, Limited
TORONTO SAFE WORKS
Toronto, Canada

Auto Tire Vulcanizing Equipment

We build a full line of complete plants or separate units. Retreading, Full Circle, and Section Moulds of approved design.

Send for Catalog and Price List

W. H. HODGSON & CO.
Swift Current, SASKATCHEWAN



Good Climbers.—Clerk—Let me show you our latest machines. We have a motor car now that can climb any hill on earth.

Chauffeur—That's nothing. The last one you sold me tried to climb a tree.

* * * *

A Fine Scheme.—"How can you afford so large an automobile?" "I've got a scheme for cutting down expenses," replied Mr. Chuggins. "I'm going to put a kitchenette and a folding bed into the machine and save rent."

* * * *

Why He Overslept.—Mr. Redd—Do you know I dreamed I was cranking that flivver of mine?

Mrs. Redd—No wonder you are late for breakfast. I thought you never would wake up!

* * * *

Attractive Hell.—In a burst of eloquence in denunciation of the world's wickedness, the worthy parson declared:

"Hell is full of cocktails, high-balls and peek-a-boo waists."

Voice from the gallery :

"Oh! Death, where is thy sting?"

* * * *

What a Miss!—Said the professor: "A kiss is a noun,

But is it proper or common, Miss Lee?"

With cheeks like roses and eyes cast down,

"I think it is both," answered she.

* * * *

To-day!—"You don't see many of the old-fashioned girls nowadays, do you?" asked a visitor.

"No," sighed the boss of the local marriage bureau, "now the girl who used to say 'Ask papa,' has a daughter who cries, 'Give her more gas, George, father's gaining on us!' "

* * * *

Rock-a-Bye Nigger.—An old darky went to the judge and wanted to have his wife arrested for rocking him to sleep.

"Why, man," said the judge, "you can't have your wife arrested for rocking you to sleep!"

"That's all right, judge," replied the darky, "but you should have seen the rock."

* * * *

The Deacon's Non-Arrival.—A deacon in an Ohio church was seriously ill. He was a popular man, so a bulletin was posted at the church regarding his condition. It read:

"One o'clock—Deacon Jones very ill."

"Two o'clock—Deacon Jones worse."

"Three o'clock—Deacon Jones dead."

A traveling man read the bulletin and added:

"Seven o'clock—Great excitement in heaven; Deacon Jones not yet arrived. The worst is feared."—The National News.

* * * *

Essay on Pants.—Pants are made for men and not for women. Women are made for men and not for pants. When a man pants for a woman and a woman pants for a man, that makes a pair of pants. Pants are like molasses; they are thinner in hot weather and thicker in cold weather. There has been much discussion as to whether pants is singular or plural. Seems to us that when men wear pants it is plural, and when they don't wear pants it is singular. If you want to make the pants last, make the coat first.

DYKE'S AUTOMOBILE ENCYCLOPEDIA

960 *Pages,* 3,362 *illustrations,* 6,000 *lines of Index*

THIS book has again been revised and greatly improved, and is a useful "Repairman's Guide." In addition to its mass of information on automobiles, covering every detail from the construction and repair of the axle to the repair of radiator and top, many new subjects have been added. For instance: how to make electric tests of the starting motor, generator, battery, coils, magnetos, etc. In fact, the subjects are dealt with in such a simplified manner that one can almost understand by a mere glance at the numerous illustrations.

The storage battery subject is profusely illustrated, and anyone who can read plain English can soon learn how to diagnose trouble, dis-assemble, repair, assemble and recharge batteries. A feature of this instruction is a simplified explanation of the "Cadmium Test" of a storage battery. One naturally thinks of a very technical and complicated subject, but after reading this subject and a glance at the numerous illustrations the "tech" part becomes perfectly clear.

Written For Laymen, Too

Then there are many other subjects which the average repairmen must know about, such as fitting pistons and piston rings, etc. In order to do this work intelligently he must know how to work in thousandths part of an inch. This subject is so simplified, even the laymen could do this work, after studying the instructions.

The tire subject is very interesting. One learns the difference between the "molded" tire and "wrapped tread" tire. The difference between the "fabric" tire and the "cord" tire and the advantage and disadvantage of each. Such subjects as blow-outs, stone bruises, loose treads, etc., are thoroughly treated with an explanation of the cause and how to repair.

The subject of vulcanizing not only deals with the "sectional" method, but also the "wrapped tread" method. The equipment necessary to start into the tire repair business is also dealt with. In fact, many pages are devoted to the subject of, "how to start into the different branches of the automobile business," from building and equipping a home garage to that of one for business.

The book covers practically every phase of the automobile industry and deals with automobiles, trucks, tractors, motorcycles, airplanes, airplane engines, including the Liberty engine, fully illustrated.

Profusely Illustrated

There are supplements with 332 illustrations on the Ford and Packard car, part printed in colors. Every detail of the Ford is explained. For instance, how to rebuild a Ford and make it do 60 miles per hour; how to make every known repair from the axle to the engine. The Ford new electric system is fully illustrated, in fact the illustrations go so far as to show the internal wiring of the "cut-out" and its principle of operation. There are also five colored inserts, a dictionary, and a lot more of valuable information too numerous to mention.

The author, A. L. Dyke, is a pioneer. He originated the first automobile supply business, published the first practical book on automobiles and manufactured and marketed the first constant level (float feed) carburetor in America. Mr. Dyke's latest origination is that of working models, of parts of the automobile, for instruction by mail.

This tenth edition sells for $5.00. Published by A. L. Dyke, St. Louis, Mo. During the war this book was used extensively by the U.S. Government and was also sanctioned for use in the Schools of Military Aeronautics, England.

Moody "Steel Queen" Hay Press

A good, reliable paying proposition *for* Dealers

The Steel Queen weighs approximately 4,000 lbs., although it makes a bale of 17" x 22".

Requires little power to operate. A 6 H.P. engine will do good work.

Safety and durability are two features that will appeal to prospective buyers. The rigid construction ensures a lifetime of reliable service.

Tell the farmer he can save money on his own hay pressing and make big money pressing hay for his neighbors during his spare time.

Speed of the "Steel Queen" Press

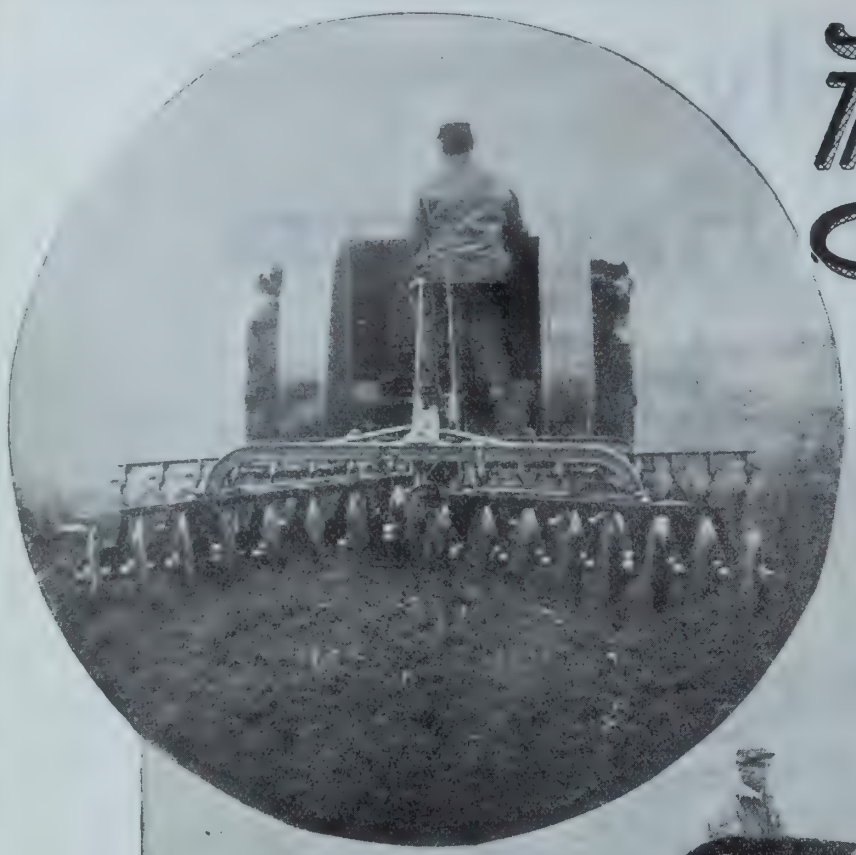
397 rev. of pulling gives 16 plunger strokes per min.
447 rev. of pulling gives 18 plunger strokes per min.
497 rev. of pulling gives 20 plunger strokes per min.

Dealers: Write for our agency proposition to-day. We'll be pleased to give you fullest particulars.

MATTHEW MOODY & SONS CO., HEAD OFFICE **Terrebonne, Que.**

REPRESENTED IN THE WEST BY

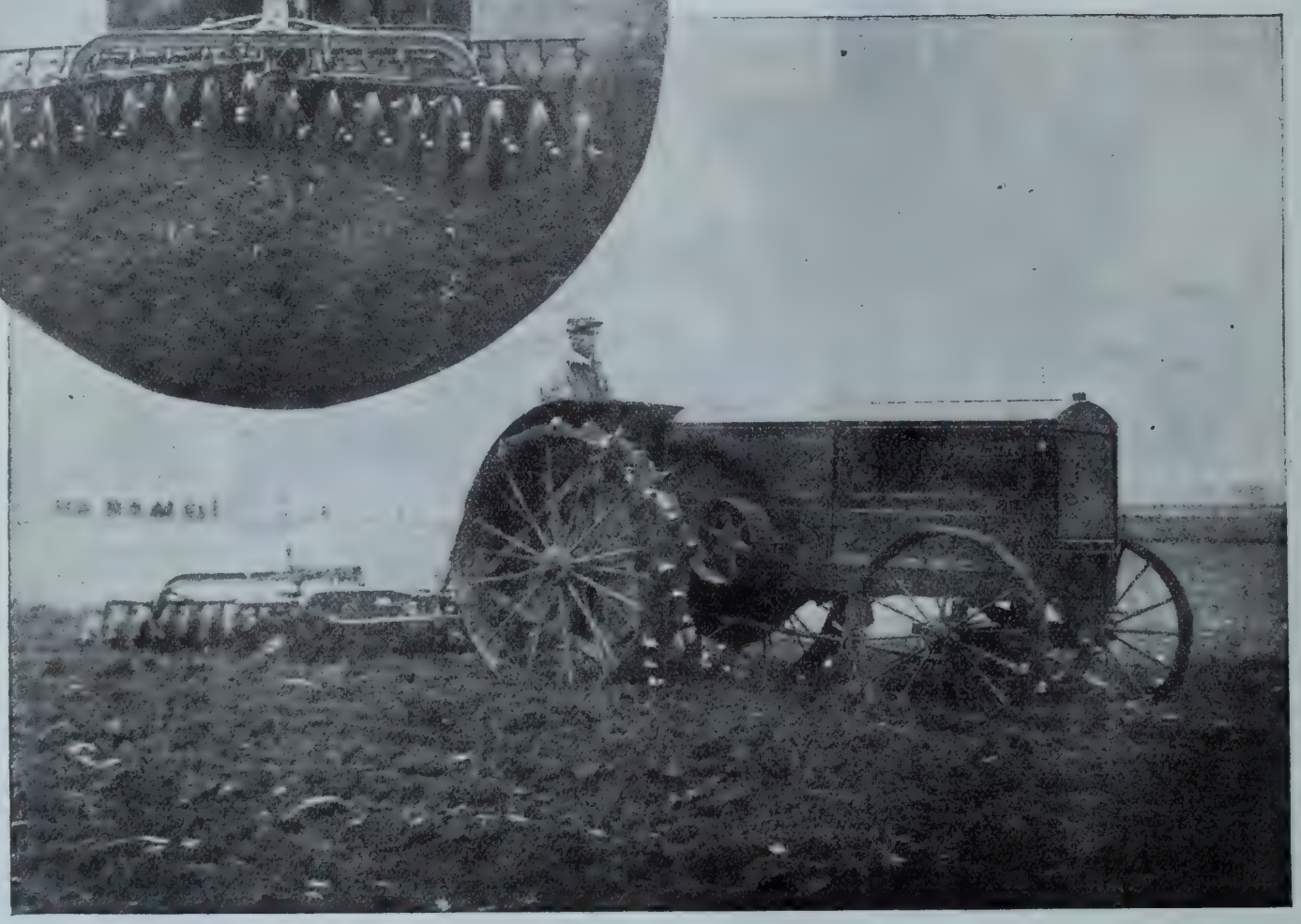
Messrs. Francoeur Bros., Camrose, Alta. **New Home Machinery Co., Saskatoon, Sask.**
Mitchell's Hardware Company, Brandon, Man.



The LAUSON 15-25

DUST PROOF-ALL GEARS ENCLOSED

at OTTAWA



The Tractor Masterpiece

The "Lauson" performance at Ottawa and Chatham was witnessed and admired by thousands of farmer visitors.

The "Lauson" of to-day is the pattern tractor with some added refinements which made "Lauson" more than ever the tractor masterpiece.

There is no change in design ; it is still made in only the one powerful 3-4 plow size.

The refinements consist of:

—a larger engine which allows of increased rating on the belt pulley
—Gear Driven Fan—Lauson Air Washer—Sylphon Thermostat

MR. DEALER: "Lauson" Tractors are building business for dealers everywhere. Write for the agency in your district—**the sales are easy and the commission good.**

De Laval Co., Limited, Peterboro, Ontario

Distributors for Eastern Canada for
THE JOHN LAUSON MFG. CO., NEW HOLSTEIN, WIS.

ALSOP-ALL-SPARK

THE Alsop-All-Spark, which is being manufactured by the All-Spark Ignition Co., Inc., 13 Water street, New York City, is controlled from the inside of the car, and the manufacturers claim that it eliminates in times of emergency all spark-plug troubles on four-cylinder cars.

The Alsop-All-Spark can be easily attached to any car. A hole is bored through the dashboard and the device is then screwed in over the engine. The dial is screwed on the side near the driver so that the handle projects through the hole and engages the centre of the device. The wires are taken from spark plugs and attached to the bottom set of terminals. New wires are attached to the top terminals and run back to the plugs.

The voltage control is from the dial on the dashboard. A slight turn, and the spark is far more powerful, the manufacturers claim, than from the highest tension magneto with the advantage that a low voltage is used for starting. At high speeds or under heavy loads it will fire every charge of gas regardless of dead plugs, poor or high compression, oil, carbon and uneven gas mixtures, insuring maximum power under all conditions, and also from any type of ignition system. An unqualified guarantee goes with this device—it is guaranteed for the life of a car.

Alsop-All-Spark.

REBORING TOOL

THIS tool is intended for use in connection with Fordson Tractor and Ford Model "T" engines only. It is for reboring and burnishing cylinders. It is light and portable, of simple construction and has comparatively few parts. The boring and burnishing tool can be operated either by hand or power, as a crank is furnished for hand operations and a universal point suitable for any drill press can be used where power is available.

In setting the tool preparatory to a boring operation, locating blocks are used, and when the tool is securely bolted in place, those are removed through a hand hole prepared for that purpose. The boring tool being supported at both ends, prevents a tendency to creep or bore at an angle. The boring is done by a single point cutter of high speed steel. Power from the crank is applied to the feed screw and sleeve by two gears and four pinions, theseimparting a differential motion, which causes the sleeve and screw to operate in the same direction, but at different speeds, which gives the desired feed action, and produces the desired resistance of the tool during the strains of cutting.

When boring is completed, the support at the bottom of the cylinder is removed, and the burnishing tool applied to the boring tool sleeve by means of a key, which fits slot in sleeve. As the burnisher is self-centering, the bottom support is no longer needed. The burnishing tool consists of a series of floating rollers, set at an angle, and supported by two collars. The angular position of the rollers causes them to feed properly through the cylinder bore.

The makers, the Michigan Machine Company, Detroit, claim that the cutter is capable of boring from 20 to 30 cylinders before regrinding is necessary. Average time for reboring and burnishing four cylinders by hand is 1½ hours; by power, 1 hour.

WEAVER BUCKET PUMP

THIS is a very convenient and practical device for handling engine oils and soft greases. The makers say it eliminates all waste of lubricant, and enables it to be handled with convenience and accuracy. The Bucket Pump is of valveless construction, and permits lubricants to be handled in three ways:

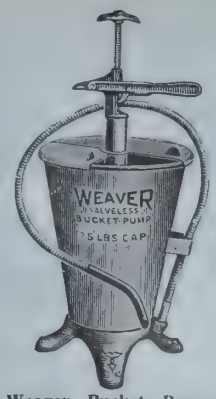
First.—The lubricant can be forced out of the bucket and into the desired receptacle.

Second.—Grease or oils can be sucked out of the differential, transmission housing, etc.

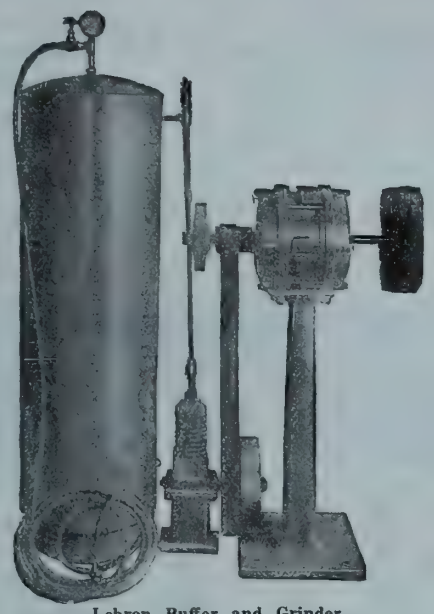
Third.—The barrel or chamber of the bucket may be sucked full of foreign lubricant, and discharged again through the hose into a third receptacle, without disturbing the contents of the bucket.

The cylinder has a total capacity of one pound of grease or heavy oils.

The Weaver Bucket Pump is made of heavy sheet iron, and has a capacity of 25 pounds of lubricant. The cylinder is of 16-gauge brass, two-inch diameter, containing a plunger which will not leak, and is impervious to the action of grease and oils. The bucket is equipped with ⅝-inch flexible steel hose. It is made by the Weaver Manufacturing Company, Springfield, Illinois.

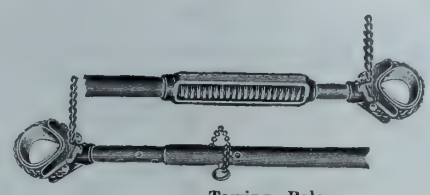


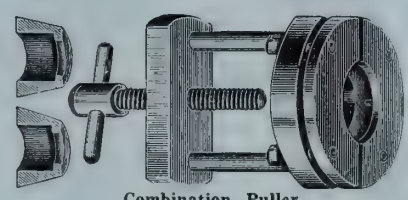
Weaver Bucket Pump


Lebron Buffer and Grinder.

LEBRON STAND

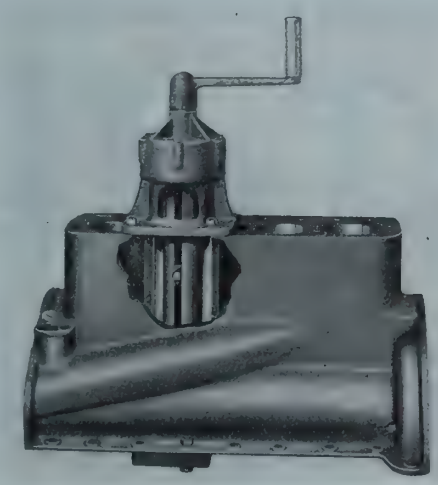
THE Lebron Buffing and Grinding outfit will do the work of three individual machines; viz., buffing, grinding and operating an air compressor. The makers claim the motor has taken four years to perfect, is of high-grade manufacture and will stand up under hard usage. The motors are ball bearing type, dust and grit proof, and oil is filtered through felt washers. The outfit is sold complete with compressor tank, grinding wheel, buffer, etc., or if desired, motor and stand including wheels and pulley for compressor drive can be supplied—110-220-440 volts or three-phase, sixty-cycle. The outfit is sold in Canada by the Northern Electric Company, Limited, Montreal.

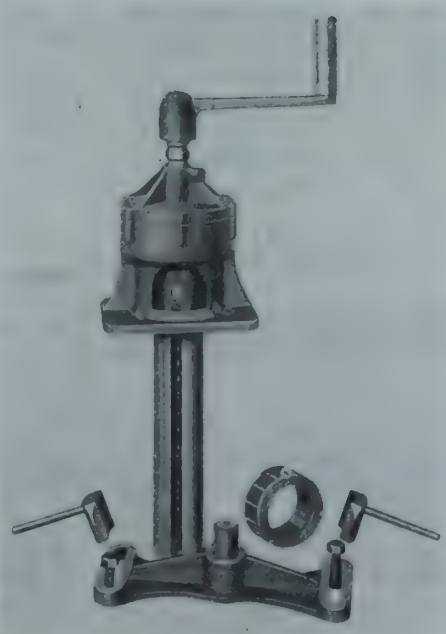

Towing Pole

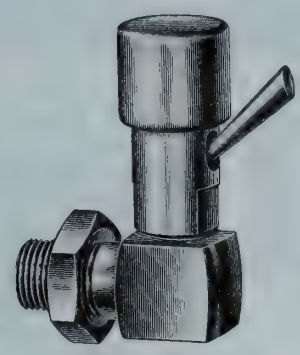

Combination Puller.

TOWING POLE

A RIGID-CUSHIONED coupling, for towing automobiles, is being manufactured by the Weaver Manufacturing Company, Springfield, Illinois. It is fitted with a heavy coil spring applied in such a manner, that it cushions both pulling and ramming shocks, say the makers. The connecting clamps are equipped with heavy steel chains, thirty inches long, with a secure spring-latch. The pole telescopes and is adjustable from five feet six inches to eight feet. It is made of double strength steel tubing.


Michigan Reboring Tool.


Michigan Reboring Tool.


Open Tucker Elbow Oiler

Open Tucker, Style "G."

Closed Tucker, Style "G."

Closed Tucker Elbow Oiler

COMBINATION PULLER

THIS is a substantial and practical device, designed to serve both as a ball-bearing puller and slip-ring puller on all makes of magneto armatures. A set of three different sized bushings accompanies the outfit to enable the removal of different sized ball-races. Paul G. Niehoff Co., Chicago, the makers of this handy tool claim that it does the work with ease and without the slightest injury to any of the parts to be worked on.

DUST-PROOF OILERS

TWO new dust-proof oilers patented by W. W. and C. F. Tucker, Hartford, Conn., manufacturers of Oil Hole Covers and Cups, have been put on the market. They are known as No. 25 style "G" oiler and No. 25 style "G" elbow combination and are for use on motor cars and trucks. Style "G" oiler and style "G" elbow combination have absolutely dust-proof ports on the side. The cap member in both cases is operated with the spout of an oil can. The port is protected by the cap member actuated by helical wood spring; the spring is protected from the weather by being enclosed in the cap member.

The style "G" cup can be thoroughly cleaned with a rag before inserting the oil can, thus preventing dirt being carried into the bearings. The Elbow Combination carries a ⅛ in. pipe thread and is fitted with a straight thread locknut to bind the device to the structure in position, thus preventing the elbow from falling down through vibration. The head of the elbow is made from ½ in. square brass rod, forming a means of attachment and thus eliminating the use of pliers or similar device.

CANADIAN

Motor, Tractor and Implement Trade Journal

BUYERS DIRECTORY

This directory will help you with your buying and your planning. The advertisers listed here are thoroughly reliable and leaders in their respective fields. They are looking for live, wide-awake representatives. Study their advertisements carefully because they contain valuable information which will dovetail with your plans. We are glad to go to the trouble of arranging this list—to make it easy for you to select new lines. If it so happens that what you want is not here, write us, and we will tell you where to get it.

AUTO ACCESSORIES
Can. Fairbanks-Morse Co., Ltd., Montreal.
Can. General Electric Co., Ltd., Toronto.
Kales Stamping Co., Detroit, Mich.
Kinzinger Bruce Co., Niagara Falls, Ont.
Northern Electric Co., Ltd., Montreal.
Champion Spark Plug Co., Windsor, Ont.
The Greb Co., Boston.
Cooper Auto Supply Co., Thomasville, Ga., U.S.A.
Motor Necessities Co. of Canada, Winnipeg, Man.
McKenzie, Crew & Co., Toronto.

AUTOMOBILE CHAINS
Can. Fairbanks-Morse Co., Ltd., Montreal.
Can. General Electric Co., Ltd., Toronto.

AXLE GREASE
A. W. Harris Oil Co., Providence, R. I.
Prairie City Oil Co., Ltd., Winnipeg.

BARN EQUIPMENT
Beatty Bros., Ltd., Fergus, Ont.

BEAN MACHINERY
John Deere Mfg. Co., Welland, Ont.

BEET MACHINERY
John Deere Mfg. Co., Welland, Ont.

BINDERS
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
International Harvester Co., Ltd., Hamilton, Ont.

BELTING
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

BATTERIES
Can. Fairbanks-Morse Co., Ltd., Montreal.
Can. General Electric Co., Ltd., Toronto.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

CARRIAGES
Cockshutt Plow Co., Brantford, Ont.

CREAM SEPARATORS
King Separator Co., Bridgeburg, Ont.
R. A. Lister Co., (Canada) Ltd., Toronto.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.
Sharples Separator Co., Toronto.

CEMENT MIXERS
Can. Fairbanks-Morse, Ltd., Montreal.

CASTINGS
Joliette Steel Co., Joliette, P.Q.

CORN HARVESTERS
Cockshutt Plow Co., Brantford, Ont.

CORN MACHINERY
John Deere Mfg. Co., Welland, Ont.

CULTIVATORS
Cockshutt Plow Co., Brantford, Ont.
John Deere Mfg. Co., Welland, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.
International Harvester Co., Ltd., Hamilton, Ont.

CUTTERS
Butterfield & Co., Inc., Rock Island, Que.

DAIRY SUPPLIES
International Harvester Co., Ltd., Hamilton, Ont.
R. A. Lister Co., (Canada) Ltd., Toronto.

DITCHING MACHINES
Can. Fairbanks-Morse Co., Ltd., Montreal.

DRILLS, TWIST
Butterfield & Co., Ltd., Rock Island, Que.

DIES
Butterfield & Co., Inc., Rock Island, Que.

DRILLS, GRAIN
Cockshutt Plow Co., Brantford, Ont.
John Deere Mfg. Co., Welland, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.

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Gilson Mfg. Co., Ltd., Guelph, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
John Deere Mfg. Co., Welland, Ont.
R. A. Lister Co., (Canada) Ltd., Toronto.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.
Fisher, Wilkie Co., Sandwich, Ont.
Sharples Separator Co., Toronto.

ENSILAGE CUTTERS
Can. Fairbanks-Morse Co., Ltd., Montreal.
Peter Hamilton Co., Ltd., Peterborough, Ont.
Matthew Moody & Sons Co., Terrebonne, P.Q.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

FEEDERS
John Deere Mfg. Co., Welland, Ont.

FARM MACHINERY
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Cockshutt Plow Co., Brantford.
John Deere Mfg. Co., Welland, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
The Frost & Wood, Co., Ltd., Smith Falls, Ont.
R. A. Lister Co., (Canada) Ltd., Toronto.
Matthew Moody & Sons Co., Terrebonne, P.Q.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

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Can. Fairbanks-Morse Co., Ltd., Montreal.
Peter Hamilton Co., Ltd., Peterborough, Ont.
Renfrew Machinery Co., Ltd., Renfrew, Ont.

FINANCIAL
The Commercial Credit Co. of Canada, Ltd., Toronto.

GRINDSTONES
S. Vessot & Co., Joliette, P.Q.

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R. A. Lister Co., (Canada) Ltd., Toronto.
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A. W. Harris Oil Co., Providence, R.I.

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The Frost & Wood Co., Ltd., Smiths Falls, Ont.
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Beatty Bros., Ltd., Fergus, Ont.

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The Frost & Wood Co., Ltd., Smiths Falls, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
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The Northern Electric Co., Ltd., Montreal.

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Cockshutt Plow Co., Brantford, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
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R. A. Lister Co., (Canada) Ltd., Toronto.
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Butterfield & Co., Inc., Rock Island, Que.

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Peter Hamilton Co., Ltd., Peterborough, Ont.

OILS
A. W. Harris Oil Co., Providence, R.I.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

PISTON RINGS
WedgeRite Piston Ring Co., Ltd., Montreal.
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PLOWS
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John Deere Mfg. Co., Welland, Ont.
The Frost & Wood Co., Ltd., Smiths Falls, Ont.
Peter Hamilton Co., Ltd., Peterborough, Ont.
International Harvester Co., Ltd., Hamilton, Ont.
The Renfrew Machinery Co., Ltd., Renfrew, Ont.

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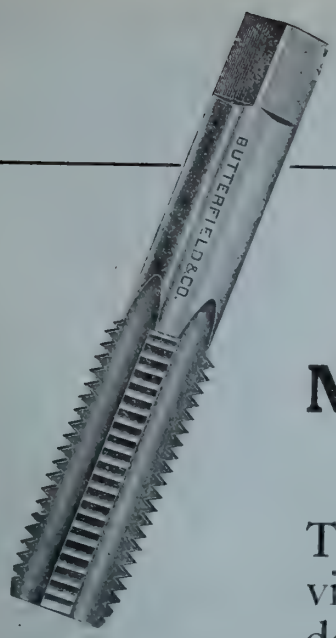

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Money Savers for Garages and Repair Shops

Try Butterfield quality tools and you soon will be convinced that they play an important part in keeping down the overhead in repairs.

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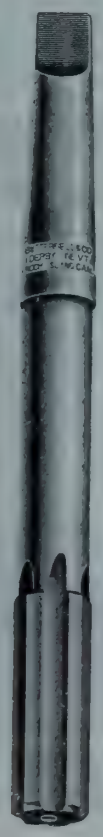

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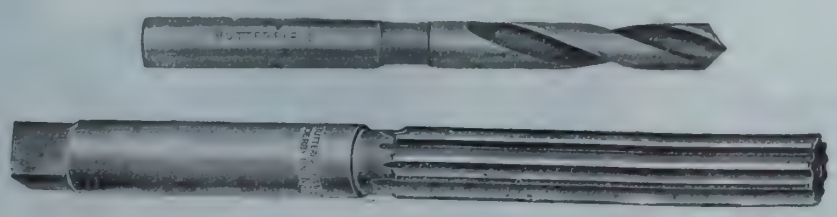


Butterfield & Co., Inc., Rock Island, P.Q.

Toronto Office: 220 King Street West

Alberta a Coming Tractor Centre

By C. K. KELLOGG

PERHAPS no Western community has been quicker to realize the importance of encouraging industrial development than the Province of Alberta, which recently established an Industrial Department and set aside a liberal appropriation to carry on the work. It is said that the policy of this department will be to carry on extensive research work to determine what minerals and other raw materials are available for the manufacturer as well as to ascertain what market can be served by the plants located within the Province.

When the armistice was signed, the factories of Martin and Phillips and the Alberta Foundry and Machine Co. had been engaged in the manufacture of shells for the American Government. The proprietors of both factories at once arranged to put their plants on a peace time basis, and both completed contracts to build farm tractors. The Alberta Foundry and Machine Co. will build a 3-4 plow outfit to be known as the "Alberta Tractor."

This machine is somewhat of a departure from the old established lines of tractor building and will be sold to the trade at about $1,000.00. It was recently given a very severe test and surprised even the manufacturers by the way it performed. The company have changed their plant and are ready to go into quantity production with the least possible delay. They hope to get into the market this fall.

Martin and Phillips contracted to build the Stinson tractor, which has been on the market for several years. They have already sold several machines and will go after tractor sales vigorously.

IT is pointed out that the three Prairie Provinces imported more than 15,000 machines during the year 1918, and that 5,249 came in during the first three months of the present year. With the certain development of the vacant farm lands, the number of tractors used in Western Canada will increase each year. Attention is also called to the fact that factories building farm tractors and, in fact, all kinds of farming machinery in Alberta will have a distinct advantage over similar plants located in the United States, in so far as the markets of Siberia, China and Australia are concerned.

Medicine Hat is making a strong bid for tractor factories on account of its abundant supply of natural gas which affords the cheapest heat and power known. It also boasts a well-equipped coal mine with more than seven feet of fine coal. A good grade of coke can be secured from Fernie, B. C., and pig iron can be had from the Superior district.

The Saskatchewan Bridge and Iron Co. recently moved its large plant from Moose Jaw to Medicine Hat and it is rumored that they, too, may engage in the manufacture of farm tractors.

Several of the largest farm implement and tractor companies in the United States have arranged to send their representatives to Medicine Hat with a view to taking the preliminary steps toward locating a branch factory in that city.

From Calgary and Edmonton comes the report that a number of new enterprises are contemplated in each city. The manufacturers of the United States and Eastern Canada have been quick to realize that Alberta has much to offer the manufacturer who ships to Western Canada and the Orient, and it is not too much to predict that the next few months will witness the addition of a number of new industries within the boundaries of the Province.

ONE LOAD—135 BUSHELS

By E. H. SCOTT

DURING the last two years H. N. Clark, a farmer at Craik, who was formerly in the implement business, has been operating a half section of land with one Fordson tractor and a Ford runabout. Last year he threshed 8,000 bushels of grain, for which the land had been plowed, harrowed and seeded by the use of the tractor exclusively. The runabout is used for hauling gasoline from town.

During the summer of last year Mr. Clark made a visit to his former home in Kansas, and while there purchased the axles from an old five-ton truck. On his return he built a trailer which he hitches behind his tractor and hauls 135 bushels of grain to town in one load. This farmer has demonstrated beyond a doubt the advantage of gas-power as compared to horse-power. The success of his first year he is repeating this year. There is not a horse on his farm.

In this same district a farmer who operates several sections of land has discarded a 40-horse-power tractor for a carload of seven small tractors, which he finds are giving far greater satisfaction with less expense proportionately. He employs an expert mechanic to keep his tractors in repair.

CAR COURTESY PAYS

By E. H. SCOTT

HAVING in mind the experience of E. R. Pendleton, implement dealer at Wetaskiwin, Alta., all dealers in motor cars should seize every opportunity to demonstrate the automobile for which they are agents by little acts of courtesy in which a brief trip comes into play.

Recently a farmer asked a local banker if he could spare the time to take out some California visitors to the homestead in his car. The banker promised to do so but had another engagement. He happened to mention the matter to Mr. Pendleton when he promptly offered to take out the party. For this special occasion he used a handsome new McLaughlin car. Arrived at the farm he was invited in for dinner, after which the farmer displayed an unusual interest in the car. He requested the dealer to take himself and party out for a brief run around the country, and before the evening closed had bought the car.

In selling a car this dealer makes an effort to put the deal through in the most satisfactory manner to his client. His policy is akin to the old song "Always leave them laughing when you say good-bye." A satisfied customer, he says, constitutes a continuous booster, and he attributes many sales to tips secured from former buyers.

Mr. Pendleton makes an effort to distribute literature by mail not only to prospective customers but to all in the district who are financially able to have a car.

AGRICULTURAL SHOWS IN ENGLAND

F. A. DOYLE, of the Sharples Separator Co., writes interestingly of a visit he recently paid to the Royal Agricultural Show at Cardiff, Wales. He says:—

I have had an opportunity to visit the Royal Agricultural Show at Cardiff, Wales, the first held since the pre-war days. This show is the mother festival of British husbandry. It was held in the most beautiful show grounds I have ever seen, and in number of exhibits far exceeded anything I have ever had an opportunity to see. There were 110 acres devoted to exhibits, which were visited by over a quarter of a million people in the four days.

Every piece of dairy equipment and agricultural machinery manufactured or imported into England seemed to be on exhibition. The grounds were laid out in avenues, with peaked roof sheds, so that all machines were under cover and very attractively placed. The vast number of machines and uniformity of display was not only attractive, but at the same time so arranged that one could walk through the avenues and see everything systematically.

Several well-known American companies had machines on exhibition, namely, Fairbanks-Morse, Walter Wood, International Harvester Company and the Sharples Separator Company, with a full line.

TO describe the types of stock would be to enumerate the whole list of British farm animals. To give you an idea, there were 867 cattle entries; 569 horses—animals of all breeds and uses from massive Shires to the shaggy Shetland ponies; over 400 pig entries, representing seven breeds; 91 goats, 278 rabbits, and 1,383 poultry entries. There were 387 entries in the produce section, produce playing a small part as compared to live stock and agricultural machinery.

It might be interesting to note that there were 81 implements of new invention on the grounds. This development is, no doubt, due to the fact that the War Ministry is encouraging the ammunition factories to take up the manufacture of farm and dairy equipment, which has in the past been imported from Denmark, Sweden, United States and Germany. And, judging from the start some of these concerns have already made, the imports of farm and dairy equipment to England will not be as great as in the past. However, there is another side to be considered: More machinery will be used than ever has been in the past, owing to the scarcity of farm labor and the present high wages. Furthermore, there will be more land under cultivation, owing to the cutting up of large estates. Then, too, high prices for farm produce will prevail, owing to the great food shortage, and this, of course, will encourage a greater number to turn to farming.

ONE WAY TO GET 'EM OUT

The Harrisburg (Pa.) Motor Car Dealers' Association boasts of a membership comprising 98 per cent of the dealers in the city, but some difficulty was experienced in getting the men to attend the meetings. Many important things were brought up at the meetings and it was found that not enough members were present to take action.

This expedient was found to work like a charm: The roll was called at one minute after eight and again at adjournment.

All members who answered both roll calls received a dollar. Most of them did not want the dollar, so all the dollars were pooled, numbers put in a hat and the winner got half the pool, the balance going in second and third prizes.

The possibility of getting $40 or $50 for attending the meeting has met with instant response.

Driving an auto tractor from the seat of a binder by means of steel rods connected with the steering gear of the car John Bueche, of Gray, Sask., has cut 200 acres of grain during the last two years. This is said to be the most unique method of harvesting a crop in Western Canada. Light and heavy crops all looked alike to Mr. Bueche, and he claims that any inconvenience to which he is put does not compare with the difficulties of handling a four-horse team.

Mr. Dealer,

The Beaver Agency is a big

Money Maker

The Beaver Truck, which is the result of actual truck knowledge, based on approved engineering, is

Canada's Lowest Hauling Cost

We can prove these statements by comparative demonstrations---by comparative values.

Write for full details and Agency Proposition

---It is built on sound engineering practice and build to endure.

---It is built by Canada's largest exclusive truck factory.

---It is built by men long experienced in the manufacture of motor-trucks and who know Canada's transportation problems.

---Part of the large saving in duty on American trucks is put into extra built-in value and the balance is deducted from the usual list price of the trucks.

Beaver Trucks

Manufactured in Canada by

Beaver Truck Builders, Limited, Hamilton, Ont.

Made-in-Canada Tractor for World-Wide Market

The plans of this company for 1920 have been made on the basis of quantity production.

A world-market makes possible a big output of tractors.

Quantity production, big output, enable us to reduce manufacturing costs,—a saving which goes to the Canadian farmer.

The Chase is not a cheap tractor—nor is it likely to be.

Every dollar that can be saved in making it is being saved. There is the saving due to big output. There is the saving due to the purchasing power which the ample resources of this company make possible. There is not a dollar wasted.

But, the Chase is not, and will not be, made to meet a price.

The men behind this company are men with high ideals. They are successful manufacturers. They take the same pride in the Chase Tractor as a farmer takes in his prize cattle. The Chase Tractor must be a good tractor. It must do everything it is expected to do. It must be a sturdy, well designed, perfectly adjusted piece of machinery that will make money for the man who buys it.

Know these men and you know that they carry out what they undertake. They can and they do.

They produced shells in tremendous quantities—a most intricate manufacturing undertaking. From the munitions plants of R. J. and W. J. Cluff over five million shells went overseas! The organization that produced this manufacturing miracle brings to the building of Chase Tractors absolute assurance of success.

The Chase Tractor—a tested, reliable Machine.

With high ideals as manufacturers and with literally hundreds of tractors to choose from, Cluff Bros. chose the ideal tractor on which to establish this business. Not, however, before they had made thorough investigation of the tractor situation and had consulted with agriculturists in every part of the Dominion. The Chase is the ideal tractor from the farmers' standpoint.

Simple in design, sturdy, powerful, the Chase Tractor represents nine years of constant engineering study and practical experience in tractor building.

A low-riding tractor, it can be used under trees for orchard work, on side-hill work and rough ground. It has no differential gears—thus it gets equal driving power on both rear wheels, giving it amazing power on hilly ground and for overcoming side-draft.

By throwing either rear wheel out of gear the driver can turn the Chase Tractor in very small radius.

The belt power comes directly from the crankshaft and is sufficient to run most farm machines, wood saws, grinders, feed choppers, ensilage cutters, anything up to a 28-inch grain separator.

The tractor with such improvements in construction as Cluff Bros.' ideals of manufacturing demand will prove a most dependable and profitable machine for the farmers to use.

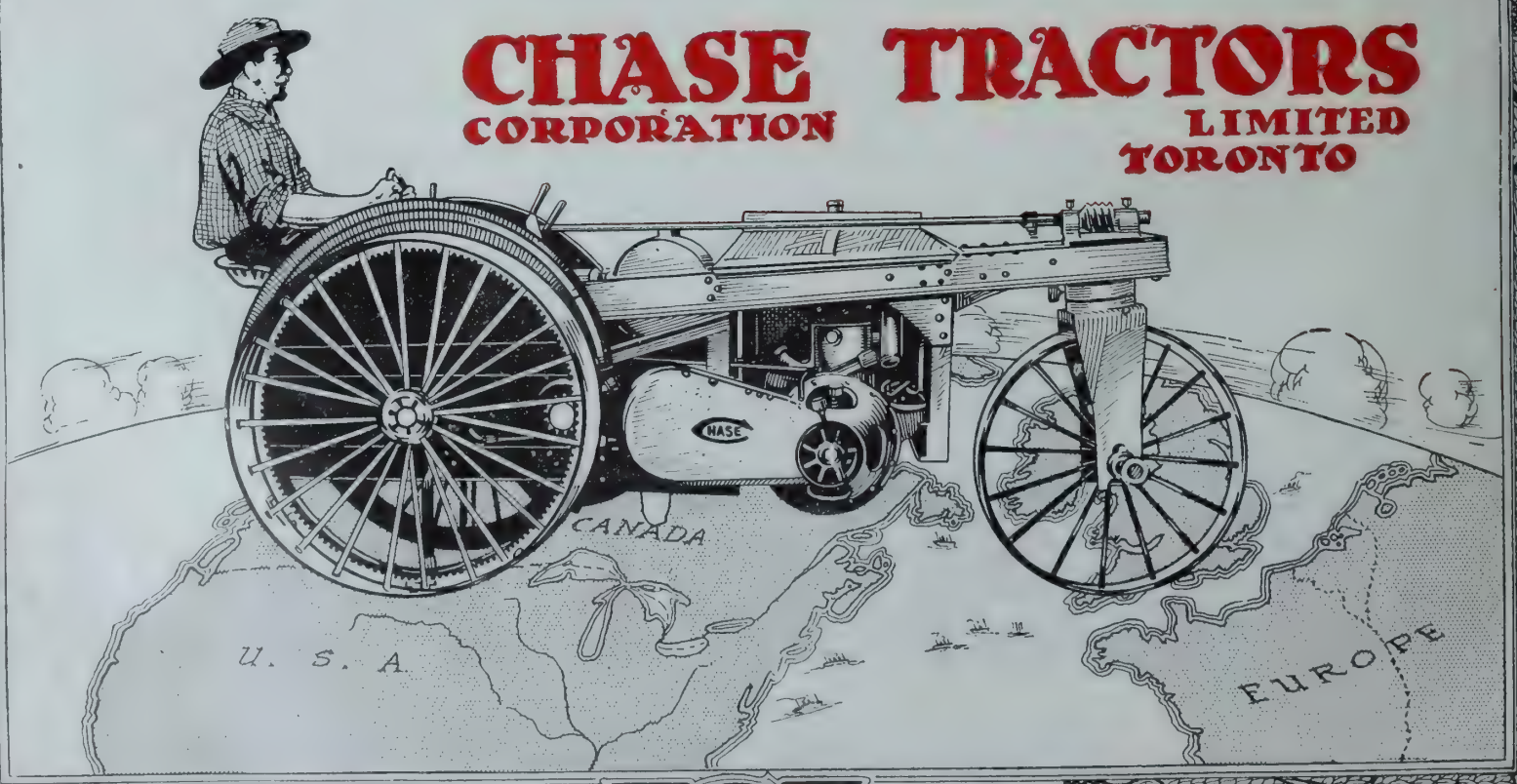
Remarkable Dealer Opportunity!

With an organization such as the Chase Tractors Corporation Ltd., behind them; with a dependable, efficient tractor like the Chase to create a goodwill for them, there is no limit within reason to the business a local selling station can create.

The Chase Tractors Corporation, Limited, invites correspondence with men with the business vision and experience to build up big local selling and service organizations.

(Chase Tractors Corporation, Limited, will also manufacture Motor Trucks. Full announcement will be made in the near future)

CHASE TRACTORS
CORPORATION LIMITED
TORONTO



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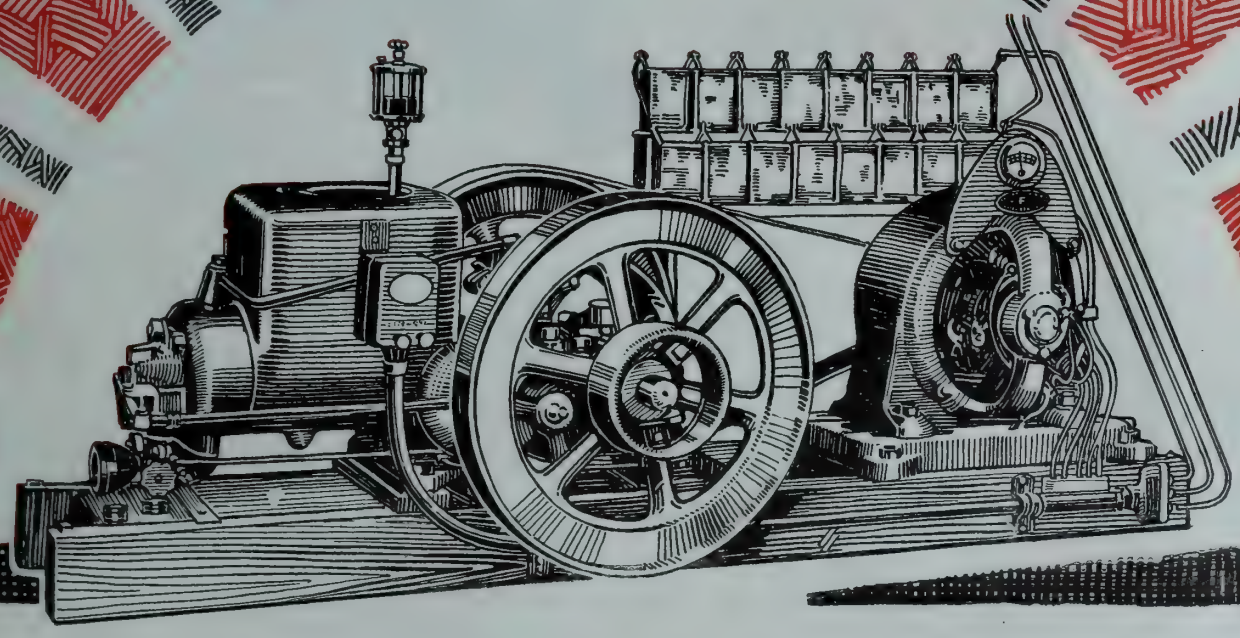
VOL. 1, No. 10 TORONTO, DECEMBER, 1919 Subscription Price $1.00 Per Year



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The maximum of both is attained in the new Fairbanks-Morse Farm Power and Light Plant. —The maximum of power because the "Z" Engine transmits this power direct by belt, even while operating the generator, and saves the 50% power loss when power is transmitted through electric motors.

—Maximum of light because of the combined low-speed engine and high-speed generator—combined with the most efficient type of battery. This plant sells itself upon demonstration, through its efficiency, low cost and low upkeep.

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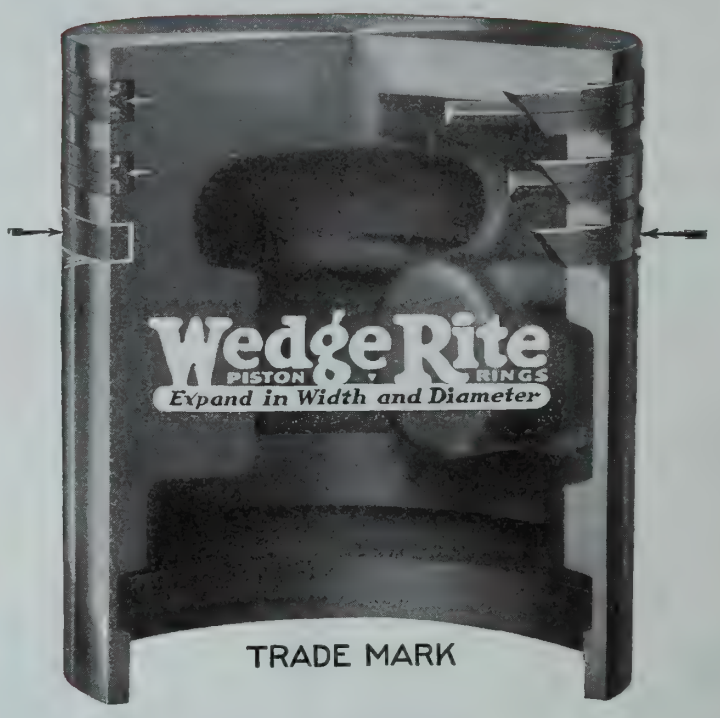
Write our nearest branch to-day for our proposition to live dealers in your territory.

Made in 40, 65, 100 and 200 light sizes.

Eliminate Your Motor Troubles with

WedgeRite PISTON RINGS

Expand in Width and Diameter



The three-piece wedge construction of WedgeRite Piston Rings forces the rings to expand in width as well as diameter. This means a tight joint, preventing the loss of compression, gasoline or oil.

When you install WedgeRite Piston Rings, fouled spark plugs and many serious motor ills vanish.

Guard against motor troubles to-day by specifying WedgeRite Piston Rings for your engine.

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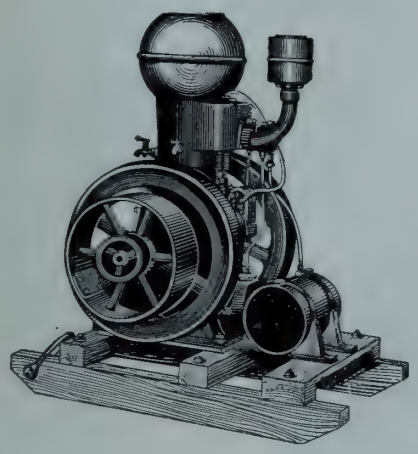
Users and dealers the world over recognize the name "Lister" in Farm Power Machinery as a guarantee of quality.



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POWER ON THE FARM

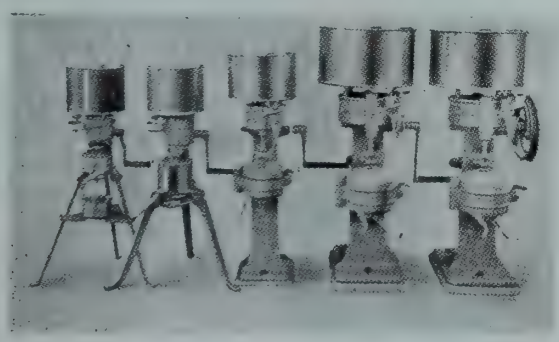
FARM POWER MACHINERY
is a dependable and profitable line

When sold it stays sold. And the satisfaction given your customer will result in other sales and good commission.

The "LISTER" Engine

2, 3, 5, 7 and 9 h.p.—Standard Hopper Cooled, throttle governed, automatically lubricated and equipped with high tension magneto. Compare the "Lister" Engine with any of its competitors and its superiority will at once be obvious to you.

Your customers are assured of long, reliable service and freedom from troubles with the famous British-built Lister Engine. Easy to operate, economical.



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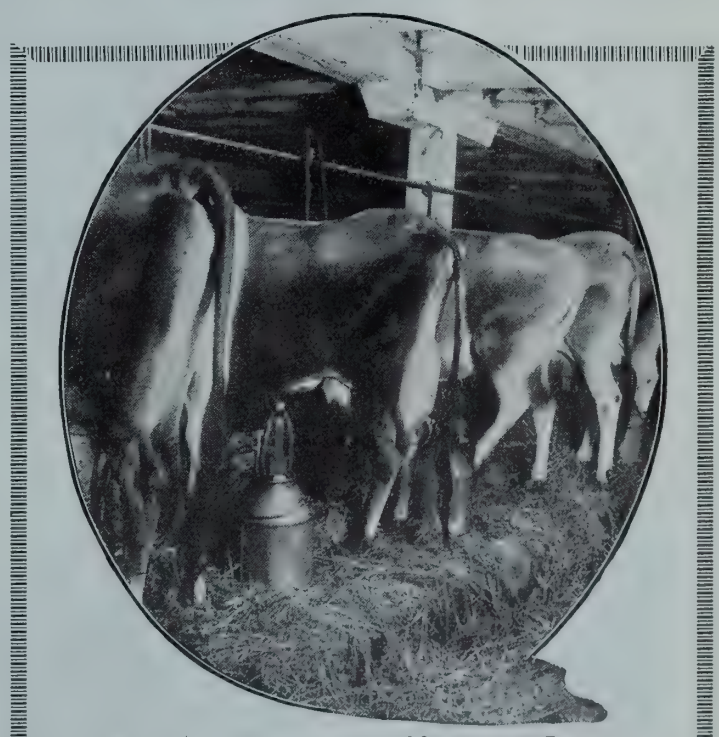
The original Melotte—unequalled for skimming efficiency, ease of operation and long life.



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has proved its wonderful efficiency and exceptional qualities in actual operation by thousands of farmers during the past ten years.
Made throughout in one of the largest and best equipped works in the British Empire, devoted to the manufacture of high-class machines for farm use.

"LISTER" GRINDERS

Guaranteed to do more work (whilst grinding as fine) than any other grinder made or offered for sale in Canada, the same power being used and all other conditions being equal.

Other Lister POWER ON THE FARM Lines

"AVERY" TRACTORS

The "Avery" is built in seven sizes—a size for every size farm—and sold at popular prices.

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Everyone is talking about the DIXIE-"ACE"

A successful tractor made by a successful organization.

Light, small, compact, yet very powerful and serviceable.

Unique, direct transmission—no exposed gears.

Outstanding in simplicity—a boy or girl can operate it.

Standardized throughout—no freak ideas.

Attractive in appearance—splendid in performance—sells on sight.

Will bring profit and pride to dealers handling it—

WHY NOT YOU?

You want to sell a tractor that will make big money for you—Here it is!

We have a proposition that will mean more dollars in your pocket.

WRITE US FOR OUR AGENTS' PROPOSITION TO-DAY.

GILSON MFG. CO., Limited

Dept. B, - - Guelph, Can.

353 Elgin Ave., - Winnipeg, Man.

The Time is Ripe

UP until a few months ago conservative farmers were still looking upon tractors as a distant possibility, but now these same farmers speak of tractor ownership as an immediate certainty.

Even those men who are in closest touch with tractor development are amazed at the way in which farmer opinion has swung irresistibly tractorward.

Farmers have not only found that they need tractors, but there is a decided preference for the

Cletrac
TANK-TYPE TRACTOR

They want the Cletrac because it replaces horses on the farm not only for plowing but for every job the farmer has to do every day in the year. They know that it will give not only a complete haulage service but an economical and dependable stationary power service as well.

1920 Presents a Wonderful Opportunity for Cletrac Dealers

If you are going to sell tractors, get started now. Spring is only a few months away. The wise farmers will buy now and get acquainted with their Cletracs before the heavy spring work begins. Cletrac dealers are finding the winter a profitable time to line up and close their early spring prospects.

Send for the dealer book "Sale Quality in Tractors," to-day.
It gives the whole story of this wonderful opportunity.

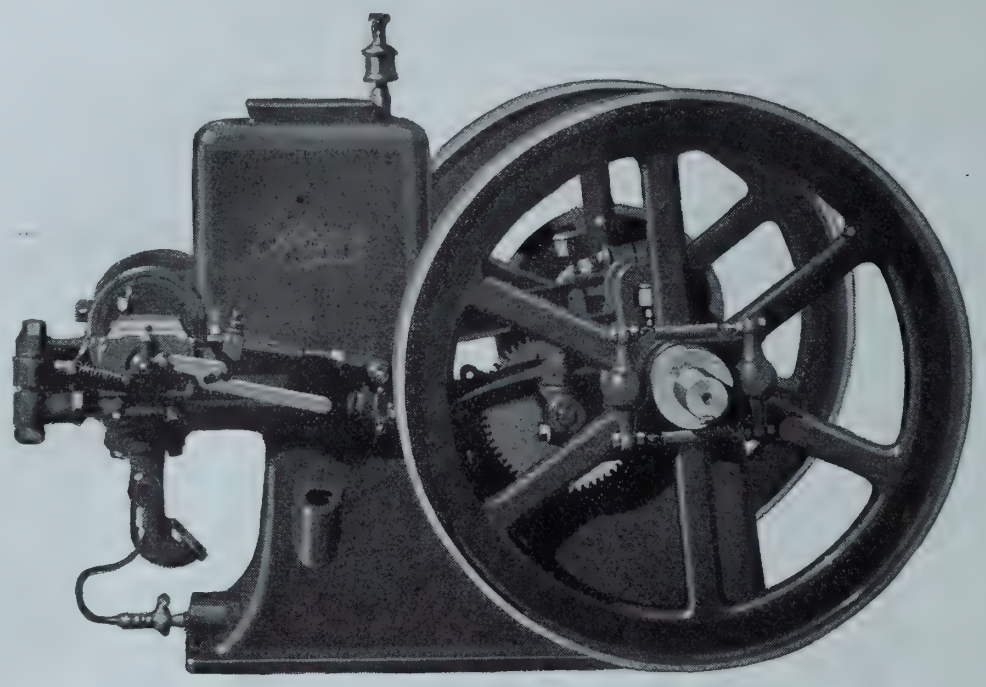
The Cleveland Tractor Co. of Canada Limited

25 Hydro Electric Bldg., Windsor, Ont.

Largest Producers of Crawler-Type Tractors in the World

The Cletrac runs on a pair of tracks like a locomotive

ABSOLUTE CONSISTENCY—MARVELLOUS EFFICIENCY



The Acme Engine of Today

The "Acme Line" of gasoline engines requires no introduction, for it is already famous throughout the British Empire and in nearly every part of the world. Truly, the ACME stands for Absolute Consistency and Marvellous Efficiency.

Practically 20,000 Acme engines are in successful operation to-day. For fourteen years they have been the recognized leaders in their field. This recognition, gained from actual performance, is convincing proof of "Acme" steadfastness under duty—no matter what nor where.

The "Acme Line" embraces all of the fine points in construction of the "Peerless" and original "Acme" engines, which were formerly made by the Acme Engine Co. of Lansing, Mich. The firm of Fisher-Wilkie Limited has taken over the entire production, together with equipment and machinery, which has been installed in Sandwich, Ontario, where a new plant has been erected.

The "Acme Line" of to-day is the product of experience and constant improvement. The years that were put into its design, construction and evolution are reflected by the new Acme engine—in its appearance, simplicity and performance. One glance is sufficient to prove that the Acme engine now being produced—a real Made-in-Canada product—embodies all of the practical features that the latest inventions have provided.

Remember—the "Acme Line" offers a complete power range—from 1¾ to 15 H.P. This constitutes probably the most useful and varied sizes on the market to-day.

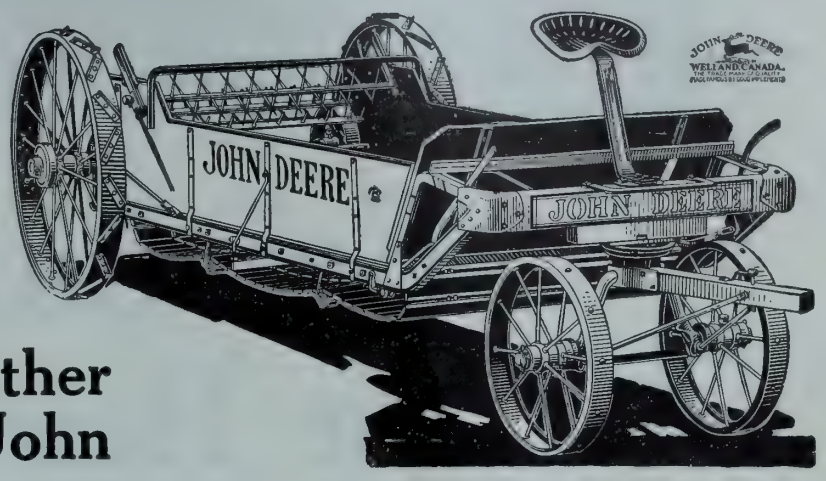
SECURE YOUR DISTRICT AGENCY NOW **WRITE FOR CATALOGUE**

FISHER-WILKIE, Limited

SANDWICH, ONTARIO

Dealers who sell John Deere Equipment are bound to become firmly established in a highly profitable business

JOHN DEERE equipment is sold through John Deere dealers only. And you can take any piece of machinery in the John Deere line, compare it point for point with other makes of machinery and John Deere will sell on its merits.



There are so many exclusive features—so many points of superiority in the John Deere line, that your sales effort is reduced to a minimum. Demonstrations of John Deere equipment will back up all that you claim for it. Satisfy yourself: Study the selling points of the John Deere line in comparison with other makes and you will readily see why it is most profitable for farmers to buy John Deere Machinery ---and for you to sell it.

Every piece of John Deere machinery has established a world-wide reputation for absolute dependability, durability, ease of handling and labor-saving ability. You have a wealth of prestige back of you when you sell the John Deere line.

The John Deere dealer proposition is decidedly interesting, liberal and highly profitable. It enables you, as a dealer, to take full advantage of your business individuality and initiative---to get the utmost out of your investment and to capitalize on your sales ability.

The John Deere policy has been and is to extend every possible factor of co-operation to John Deere dealers—to help them build a substantial business with real profit to themselves. The interests of the John Deere dealer are identical with our own.

We want live dealers everywhere. Write us now regarding 1920 contract. John Deere will go farthest in helping you to increase your yearly income.

John Deere Manufacturing Co., Ltd.

Welland, Canada

Consider the Many Exclusive Features of The John Deere Low Down Manure Spreader

The John Deere is the ONLY gear driven spreader on the market, because IT IS PROTECTED BY BASIC PATENTS. That is important. You know that nearly every automobile changed from chain drive to gear drive. They must have had good reason for changing. Choose the John Deere Spreader for the same reason.

The John Deere is an all year 'round machine—the gears cannot freeze. The beater is mounted on the axle; the drive wheels are out of the way when loading and you see where you put each forkful of manure. It can be equipped with wide-spread and straw-spreading attachments.

Fewer Parts---Less Trouble

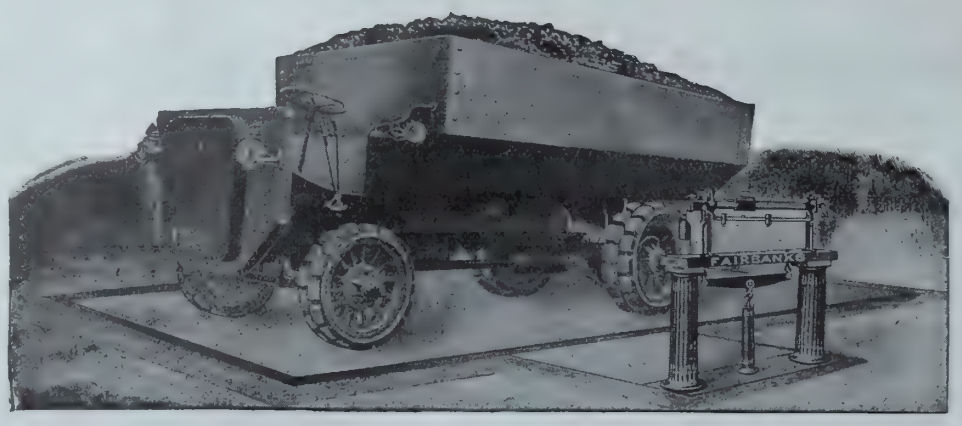
The John Deere spreader rake revolves. The manure does not bunch and choke the beater; it requires less draft: an even amount of manure is delivered to the beater and a uniform spread is certain. Manure from the load moves backward and downward. The beater delivers manure near the ground and the wind does not blow it to one side or forward onto the driver.

The sloping front board permits of higher loading at front end and makes it easy to take short turns.

Nearly 150 less working parts and castings than any other spreader.

No chains—no clutches and no trouble. All driving parts mounted on rear axle. No adjustments—nothing to get out of order.

Think how easy it is to interest farmers in the John Deere Low Down Manure Spreader—and to sell the machine. It is just as easy to sell other machines of the John Deere line.



Fairbanks Scales for Heavy Duty

---built to stand weight where weight is placed. Better roads permit heavier loads. This means an increased strain on your scale---a strain which Fairbanks Scales are built to meet, as well as meeting the shock of starting and stopping.

Be sure your scales combine the strength necessary to heavier loads, with the reliability and long service of Fairbanks Scales. Whether you are a dealer, a farmer, a hay and grain merchant---Fairbanks Scales are designed to meet your needs.

Fairbanks Wagon Scales guarantee the service and accuracy that are found in all Fairbanks Scales.

The Canadian Fairbanks-Morse Co., Limited

St. John Quebec Montreal Ottawa Toronto Hamilton Windsor Winnipeg Saskatoon Calgary Vancouver Victoria

CANADIAN
MOTOR, TRACTOR AND IMPLEMENT
TRADE JOURNAL

Volume I | TORONTO, DECEMBER 5, 1919 | Number 10

HOW TO RUN THE OFFICE END OF A SMALL AUTO REPAIR SHOP

By A. M. GLOVER
GODERICH, ONTARIO

IT seems to me that most small repairmen are "scared stiff" when you mention "office" to them. They have had so many loose-leaf, card and filing systems put before them, that, when you say office, they immediately think of what looks to them like a very complicated set of figures and accounts. What does the average man know about double entry or card systems showing the exact cost of every job, and on what lines he is making a profit?

As a rule he adds enough to make it certain that he is making a profit on his accessories, and we all know that in a small town it is a case of "come and go" on the prices charged for jobs—to a certain extent at any rate. While it is not a case of "charging as much as the traffic will bear," still, a little can be tagged on to a job that "goes well" to make up for the job that, through unforeseen circumstances, takes about three times as long as it should.

We will leave the question of making a profit to the "boss" and tackle another phase of the situation.

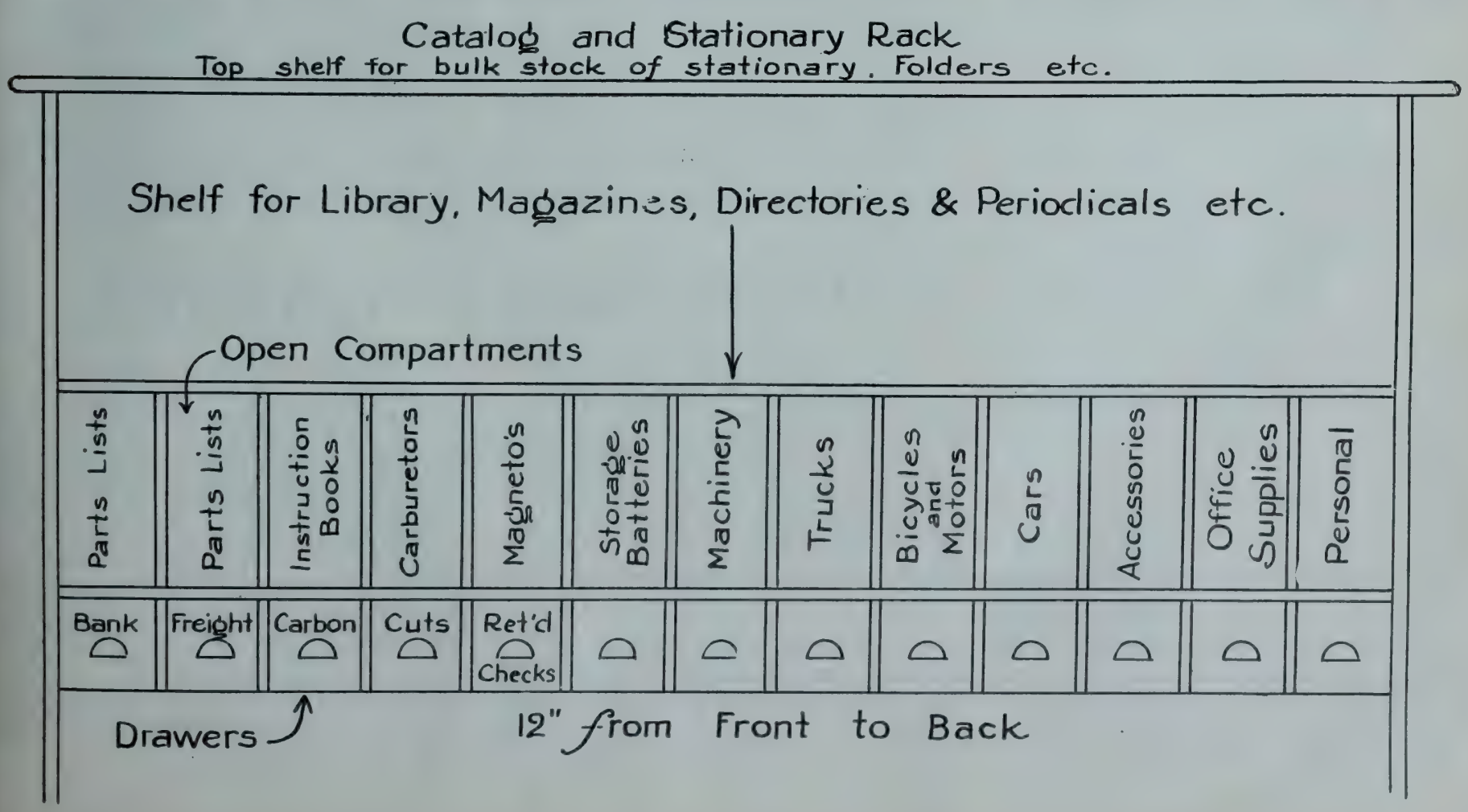
In the very first place, every shop should have a place that the boss can designate as "his office," and in it he should keep all records relating to his business. Even if you are operating in an old livery stable—and I did that for a long time—there is sure to be an old harness room that can be made comfortable at a very little expense.

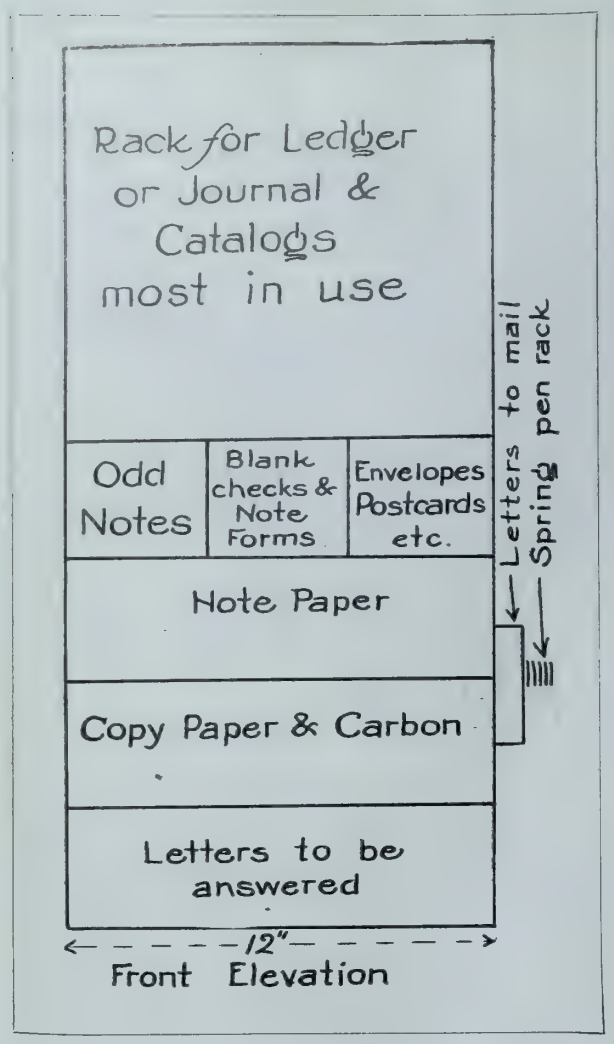
We will suppose that we have the bare room to start with. The first thing to do is to CLEAN IT OUT THOROUGHLY, then you can trim the walls and ceiling, either with a coat of paint or paper. The floor should be covered with a good quality of linoleum as it will get considerable wear.

Now we have our room ready for its furnishings. The first thing that is necessary is a desk. We don't need to spend a great deal to get this; a good solid flat-topped table is all the desk necessary, and it is far ahead of the usual roll top. It has no holes to fill up with useless papers, and everything is in plain sight. You can put a piece of plate glass on it if you want to, but it isn't necessary.

NOW we have got to have something in which to keep our stationery: something that will be handy and still not take up too much room: we also want the catalogues that we use the most to be right at hand. I designed and have used for a long time something that fills the bill perfectly; Fig. 1 gives a sketch of it. The top floor carries my check book and most used catalogues; the three small compartments directly under this carry note, draft and check forms, also envelopes and postcards. Under these again are three more compartments, these carry on the first shelf note paper; the next, carbon and copying paper; while the bottom compartment carries letters that have not yet been attended to. By putting them here they are not on hand for any visitors to pick up and read—I know of plenty of people who will do this—and yet they are handy, and you know as long as there are letters in there they need attention. The letters that have been attended to, and are not otherwise disposed of, are kept in a pile on the side of the desk. It is fairly easy for any particular letter to be picked out if needed, for the small business man does not have the volume of correspondence that a manufacturer does, and most of it is circulars at that.

There are sure to be about a dozen firms who supply the bulk of your letters; to take care of these buy a dozen bulldog clips and put everything from these firms in them, invoices, statements and letters, and hang them on the wall; that will place the whole of





their business in a very accessible place. When writing a firm in reply to a letter take their letter and make a carbon copy of your reply on the back of it, you have then both their letter and your reply to it on the one sheet; any letters you write them other than this, take a carbon copy and place it in their clip.

On the side of the stationery cabinet, fasten one of the spring pen racks and a small compartment for letters to be mailed: this will keep your pens and pencils in decent shape, and you will be able to locate them when you want them. In the compartment for checks, always keep a supply of blanks from all of your local banks so that if a customer wants to pay up, he hasn't the excuse of having no check, you can tell him that you have one; the banks will be only too pleased to supply you with these.

THE average shop has far more catalogues than could be kept in the desk rack, so build along one wall a rack such as is shown in Fig. 2. The top shelf can be used for general supplies in bulk, such as envelopes, notepaper, circulars ready for mailing, etc. The second shelf for periodicals, directories and your library; later on I will give you some idea as to your library. The compartments below should be labelled for catalogues applying to different lines; the drawers underneath are useful for office supplies, such as carbon paper, copying paper, freight bills and bills of lading, cancelled checks, electros, a personal drawer, and a drawer for insurance or other policies you may have on hand.

Now as to library. Every repair shop should make a point of getting one of the numerous books showing all kinds of wiring diagrams; this will save hours of time "figuring out where a wire goes," it should also have a directory of the trade giving the names and addresses of all manufacturers and jobbers connected with the business; write all the manufacturers of the cars used in your district for parts lists so you will be able to give the proper designation for any part you may have to wire for.

You may think; "Oh, I'll never get that fellow's work," but you may be wrong; he might rush in one day with a break-down, and if you can get the part right away for him, why, more than likely, he will be a steady customer. He may be flattered to think that you prepared in advance to meet any trouble he might have. Anyway, the parts lists cost you nothing. If you can get the manufacturer to send you a full set of instruction books as well, so much the better. A full set of parts lists and instruction books are invaluable in rendering prompt service.

It is a good plan, too, to keep a record of the model and number of every car that you know: when a car comes in, or you have a chance to look it over, make a note of the model and serial number, then enter it—in a separate book for that purpose—on the same page that you keep that man's account. This will come in handy should he telephone you to get parts for him, or when he brings in his license form for you to fill out for him at the beginning of the season.

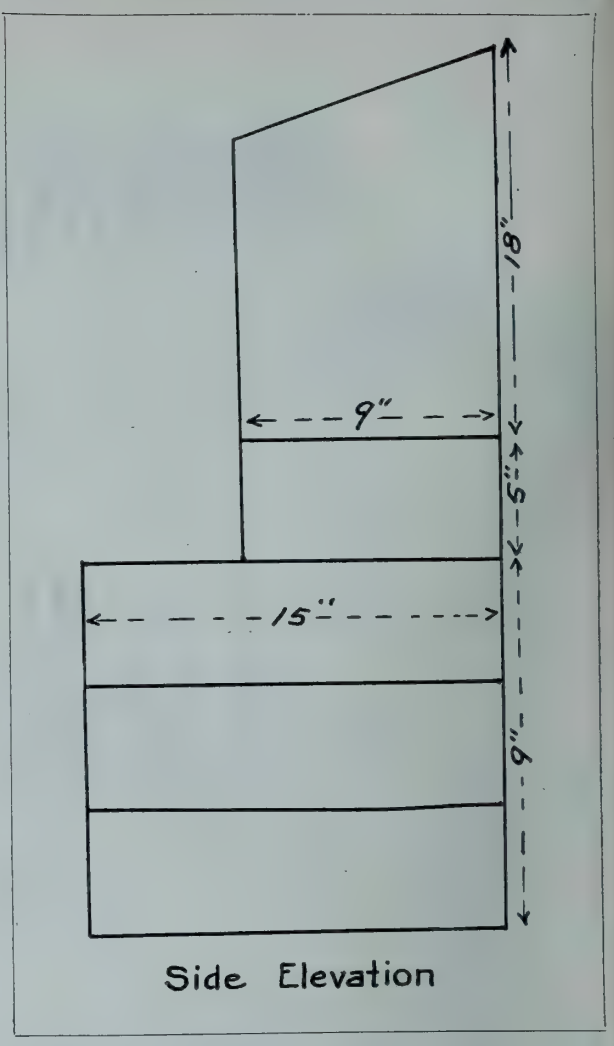
WHEN you get some of the posters giving details of constructions and dimensions of various parts of cars, such as are issued by piston ring and other specialty manufacturers, fasten them on a roller and hang them up like a picture, for they contain lots of valuable information. If you use them only once they will more than pay for the little trouble you took to preserve them. The booklets issued by the Automobile Insurance Cos. give a lot of information, and you can get one for the asking. It is nice to have a few good automobile pictures around the walls, especially if you have one showing how your place looked when you first started up and how it looks now since you have put a little "pep" into the place.

When you have these few fittings up—all inexpensive—get a couple of arm chairs put in so that you can sit down and talk to a man in comfort; have a chair at your desk also. The whole outfit for an office as outlined above will cost very little and you will be surprised at the difference in business when you can talk to a man in your "den," than when you have to be outside, subject to all kinds of interruptions.

I have found it a good plan to have some attractive accessory lying on the desk, or perhaps a catalogue of sundries handy, so that a man can pick it up and look through it while he may be waiting for something; probably it will remind him of something he needs, and you have another easy sale. Have a smoker's set on the desk too to make it look cosy and have a place for used matches, etc.; even if you don't smoke yourself it will make the old smoker more comfortable to have somewhere to scratch his matches and put cigar butts. The cash register should also be in the office, as well as the telephone—even if you have to have an extension to make this possible—for you often wish to talk privately over the phone and that is almost impossible if it is situated in the workshop.

WITH a place rigged out as outlined above, you will find getting out a bunch of circulars, letters or accounts, is not half the "chore" you thought it was; you will be able to get away with a big bunch of work, and do it in less time than ever you thought was possible.

You can use an old style salt cellar with a bit of sponge in for a damper to moisten your fingers when you count your money each night, and also to dampen the stamps for your mailing campaigns. Of course, you should get a waste paper basket and keep it just at your left hand, underneath your desk, for old envelopes, etc., so that they will not litter up your floor. You will be surprised at the big returns a small, cosy office brings. Apart from the profit attached to it, it is a nice thing to have somewhere comfortable to put in the time during the long winter evenings when you are not in the workshop. I have often sold more stuff, and done more business in an hour at night, through having a comfortable office to do it in, than I have the whole day; anything that can do this for you is certainly worth taking up.



Did you get those circular letters out we were talking about in the October issue? If you didn't you had better get a move on, or you will be looking for work pretty soon and find the other fellow has corralled the best part of it.

Tractor Schools

ARRANGEMENTS are now being made for the annual series of tractor schools, by the London Branch House of the International Harvester Company of Canada, Limited. These schools will be held, during the months of January and February, and instructions will be given at the following points:—London, Chatham, Essex, Petrolea, St. Thomas, Tilsonburg, Woodstock, New Hamburg, Clinton and Harriston. Interesting instructions will be given on the care and operation of tractors, and talks on general service.

Similar schools have been held by the International Harvester Company, London Branch, for the last three years, and they have been very beneficial to all who attended them. Invitations will be extended to all International Tractor owners, and to any prospects.

"SERVE-SELF" GARAGE

All Monthly Tenants Receive Keys to Gus Masters' Garage, Victoria, B.C.

GUS MASTERS, proprietor of one of the most up-to-date garages in Victoria, B.C.—located at 1003 View St.—has written to the M.T.I. particulars of the new garage service which he has inaugurated, thinking that it would be of general interest to the readers of this journal. He says:

"On taking over this garage I considered different methods of running it, and finally adopted the system which I will describe. I find that not only is it getting very popular, but it saves me employing more men.

"My system is this: All my monthly tenants leaving their cars in the garage have had issued to them keys to the main entrance, and they are entitled to the use of the wash rack, as well as to the use of the shop for doing small adjustments and greasing of their cars, etc. I find that most car owners enjoy doing this these days—and in addition it saves them money.

"The front portion of the garage is about 80 by 35, and this is now almost full of private cars, which shows that the people who keep their cars here appreciate being trusted. I am sorry that I cannot tell you more in detail now, but I am pretty busy running the business."

This system of Mr. Masters' seems a very sound one, and one that is likely to grow in favor with the motoring public. One of the handicaps under which the car owner has to suffer, when he has no private garage, is that he must have all repair work done by $1.00-an-hour mechanics, unless he takes his bus up a lane, or does his minor repair work on the pavement by the curb in front of his house.

No nightwatchman is kept at the door of the Masters garage; an owner can drop in at two or three o'clock in the morning, unlock the front door, and off he goes without any bother.

Fine stuff, we say!

Miss Normand *and* Charlie Chaplin Used as Background for Tractors

Live Dealer Gives Advice on Getting Out After Business

Z. LABROSSE, JR., Vankleek Hill, Ontario, has been selling lots of tractors, besides looking after a big implement turnover this season. His place of business is so situated that he runs his tractors out in front of the bill boards where Mabel Normand and Charlie Chaplin are displayed. Every time anyone looks at Mabel or Charlie, he has to take in the tractor, too.

Mr. Labrosse writes to M. T. I.:

"One of these tractors I sold to H. M. Allen, who is using it for grading work in this town. You will see me standing by the lower tractor, in my shirt sleeves. This tractor is operated by a mere boy, Ernest Allen, son of the owner.

"It is very important to go after implement and tractor business with plenty of zest. I keep steadily canvassing every farmer, and also place posters in blacksmith shops and hotels in the adjacent territory. I make it a point to give every farmer who buys from me the very best service that lies within my ability. I advertise in the Vankleek Hill paper, and find this gets fine results.

"If a man wants to sell lots of implements and tractors he must go out and get busy. Sitting in your office doesn't pay.

"To-day I had a good day—I went out and sold the following: one 10-20 Titan tractor; one 6 h.p. engine; one corn binder; one 6-foot mower, and one land roller. If I had stayed at home, I would have had no sales to register."

"Some day," is right!

Banishing Free Service Bugaboo

Motor Products, Ltd., Has Solved Problem by Forming "Service Club"

THE "Free Service" question is one which has been debated almost ever since automobiles came on the market, and the trend of opinion throughout autodom is distinctively opposed to free service. Many an auto has imposed on a good-natured dealer by asking him to tighten the clutch, or to "see what causes that scraping," or with some other comparatively minor requests, but when all these quarter-hour jobs are added together they make a formidable total.

Of course, this does not refer to such installations as free air and water. As long as free air can be provided without taking up the mechanics' time, or cluttering up floor space unduly, most garage men feel this is "good business." We recently observed a case where a car owner drove up to a garage with a cracked axle and some minor troubles, which would have run into $50 or $60 repair bill. When he reached the door he found several cars blocking the entrance and occupying valuable floor space—all but one filling tires, filling a radiator, etc. After five minutes' wait he drove away, disgusted, to another garage.

IN several places this design has been noted above a "free air" connection. "Free, if you do it yourself; five cents per tire if we do it." That's good, sound business.

Motor Products, Limited, distributors of automotive accessories, Winnipeg, have solved the question of free service in a rather unique way. A "Service Club" has been formed, and regarding its origin and purpose the Motor Products' manager, W. E. Garnett, writes to the M. T. I. as follows:

"Our company was giving a Universal service to automobile owners and figuring that we were cashing in, by selling the automobile owner all his accessories, handling all his battery repair work and battery replacements. We found, however, that there were a lot of users of our service who did not give us any business.

"On checking matters up very closely, we found cases where a man would buy a new set of tires at a cut price from some other dealer and then come to us for service, and, to this kind of customer, we were givingall minor service up to about fifteen or twenty minutes of our men's time free.

"The object of a 'Service Club' is to make our service better to our real customers and to eliminate the parties who were not customers. Hence, to our real customers, we give a number, and all the particulars of their cars are registered, as to year and model of the car and all other details, and a small transfer disc is put on the corner of the windshield with the service number on. When he requires service, he can advise the service manager what his service number is, and we know at once all details.

"We can also check up at any time, how much business we receive from any service number. In this way we are in a position to increase our service to these customers should we feel that we can afford to do so from the volume of business we get from them, or viceversa as the case may be."

Auto and Accessory Prospects

NEW YORK.—Not even the most optimistic can believe that the next ten years will show a similar ratio increase in the number of cars in operation in this country that the past has, but judging from some of the inquiries being received from the export trade, American manufacturers have not only a decidedly optimistic outlook from the domestic trade, but an additional outlet for thousands of cars for shipment to foreign shores.

A study of the growth of the industry during the past few years is of interest. In 1903, when Ford started his career, his total output was 1.708 cars. In 1911 this had jumped to 34,000; 1913, 164,000; 1914, 248,-000; 1917, 785,000; 1918, 700,000, with 1919's production estimated at one million cars. The General Motors, who were in 1911 but a comparatively small corporation, produced a total of 28,000 cars. This increased gradually until in 1914 the out-turn was 76,-000; in 1917, 182,000; 1918, 246,000, with a probable output of 375,000 cars this year. Other manufacturers have shown a similar proportionate increase.

It was estimated in 1917 that we had absorbed about all the cars that we were able to maintain in service. But since then this limit has been greatly raised by the immense increase of wealth and income of our people, which is still materially increasing and leaves plenty of room for expansion in the industry. The table gives an idea of the industries' growth:

	Regist'n Dec. 31.	Year's Output.	Cars Scrapped.
1911	677,000	210,000	5,700
1912	1,010,483	378,000	44,500
1913	1,253,875	483,000	239,600
1914	1,736,790	573,114	90,199
1915	2,471,595	891,618	205,620
1916	3,544,952	1,617,708	547,545
1917	4,941,276	1,938,778	542,454
1918	5,945,400	1,153,638	149,438
1919	6,700,000	2,800,000	2,105,400

This shows that for the period of nine years there has been a total of 10,000,000 cars built and almost 4,000,000 of these scrapped so that it can be seen that the life of the average car is somewhat less than three years. It is estimated that the present capacity of all recognized automobile and truck manufacturers would be required simply to replace the cars that are scrapped each year.

At the present time the building and delivery of cars is going on at a rapid rate, far in excess of all previous records, whereas the increase in registration is comparatively small. This means that thousands of motorists who last year kept their old cars in service as they were unable to secure new ones, are now purchasing new machines. The figures also indicate that in 1914, old cars were kept in service because of business depression. Past experience of manufacturers has well demonstrated that the American people want above all newness. We apparently live in terror of being considered out of date, and to satisfy our vanity are buying cars often more from the outward appearance than from a durability standpoint.

In automobile accessories similar conditions exist, particularly in the lines of goods that may be considered accessories rather than necessities. While it is not desirable for a jobber to ever sacrifice durability for show, yet the finish and style and the points that will please the eye of the public about any line of merchandise must always be borne in mind, for the more attractive accessories are made, the quicker they will sell and at a higher margin of profit.

THE accessory dealer has every reason to believe that business with him will not only continue good, but will be greatly improved and with the increasing demand, short and slow deliveries are to be expected, making it advisable for him to anticipate his wants for a greater period than he normally would.

It is doubtful if prices will show any material change as long as the demand continues on its present high plane and as long as the increase is so evident. Therefore, there is apparently nothing to lose from making purchases early and taking in stock against existing contracts as promptly as possible.—*Auto Links.*

C.F.M. Convention

THE Canadian Fairbanks-Morse Company, Limited, held a two days' convention for Ontario dealers, November 19-20. The main topic of discussion was linking up the Sales Campaign for 1920 on the "Z" Farm Engine, and the Case tractor.

G. B. Wheeler, general sales manager of the Toronto engine dept., assisted by R. B. Daigable, presided over the meetings, which were opened by R. W. Evans, manager of the Toronto branch—in the absence of Graham Drinkwater, vice-president of the company. Papers were read by: Messrs. L. S. Haney of Fenwick; Nesbet of Newmarket; A. H. Alfsen, Toronto, and T. Clough, travelling salesman of Canadian Fairbanks-Morse Company.

D. R. A. Drummond, of Case Service Dept., entertained the dealers for two hours with moving pictures, showing a four-reel film describing the tractor in the making, from designing room to the farmer. Another interesting feature was a number of lantern slides illustrating the various parts of the tractor, and explaining their functions.

The visiting dealers, seventy-five in number, were entertained the first day at the theatre and a banquet. The second day was occupied chiefly with business, and inspection of the company's works.

The conference was held at the Canadian Fairbanks-Morse Company's factory, at Toronto.

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SERVICE

IN that past few months—in fact, ever since the first issue in March—we have talked a good deal on the question of service—the service that the implement, tractor and automobile dealer should give his prospects and clients. In this paragraph we are going to discuss two or three brands of service which the M. T. I. is prepared to give.

We have received a large number of letters, and several personal calls, from dealers, distributors and manufacturers asking for information on certain subjects—such as what distributor handles a certain spark plug; where can a good wiring chart book be bought; what manufacturer can supply a 5 k.w. power plant; how many tractors were imported into Canada in 1918; and others too numerous to mention. Practically all have been answered direct to the individuals interested, both in order to save time, and as they often would not prove of general enough interest to be treated in the reading columns.

This is a class of service we are always glad to give—it's our desire to give it, and supply information and advice to the best of our ability. So, please remember that if

You want to build a garage, or
An implement warehouse, or
You want a good "prospect" letter, or
Advice regarding a neat letter-head, or
Any specific information about autos, tractors, implements, or accessories,
GET THE HABIT
AND WRITE M. T. I.

If we haven't the information, we'll get it for you—if it is procurable.

LAYING UP THE TRACTOR

MANY farmers who have not sufficient belt work to keep their tractors busy during the winter will require to lay them up. It is the dealer's business to instruct them in the proper methods of doing this.

In the first place he should encourage the farmer to construct a suitable building guaranteeing adequate shelter; an open shed where the rain and snow can blow in from all angles is an impossible place to house a piece of machinery costing $1,000 or more.

After properly housing the tractor the dealer should show the farmer how to look after the various parts of the engine to ensure good results. The radiator should be drained, being careful that the last drop of water is run out; it is advisable to let the engine run slowly until this is done. All clear surfaces and working parts will be preserved by a coating of vaseline; pure vaseline is better than any other oil or grease.

The magneto should receive special attention, care being taken that the bearings receive a sufficient protecting covering of vaseline. Drain the fuel tanks, carburetor, etc., but leave oil and grease in the transmission and other moving parts. If there is a storage battery it should be removed and stored away where there is no danger of freezing. Be sure the terminals are properly greased. If dry cells are used it is advisable to remove them, and as they gradually depreciate with age, despite all care, the dealer should advise the farmer to use them for other purposes and get new cells for his tractor in the spring.

If any repairs require doing, such as valve-grinding, etc., the dealer should encourage the farmer to get them done at this time so that when the spring work begins the tractor will be in good shape to commence operations.

CHRISTMAS GREETINGS FROM THE WEST

THERE is a world of sentiment and interest in a babe's first Christmas. With what feelings of unalloyed joy the parents usher in the festal morn, and what a day of surprise and gladness it is for "Toodles." As a Westerner who has watched the growth of the Canadian MOTOR, TRACTOR AND IMPLEMENT TRADE JOURNAL from its days of swaddling clothes last spring to the advent of this, its first Christmas celebration, there comes a desire to "horn in" on this exclusive family affair and help to fill the stockings of this husky youngster with all the noise-making paraphernalia that is its due, coupled with congratulations and the season's heartiest greetings.

For a nine-months-old kid I feel that M.T.I. has earned the right to wake the neighbors in the surrounding apartments with a din in keeping with its importance, and taking the special occasion into account. I have personally travelled all around the West this summer and fall visiting implement men everywhere, and you have my word for it that this magazine has caught on big in the West. You have the further word of "Bab" that the Western dealers were just naturally hungry for just such a publication. I would like you to meet "Bab." I think that apart from the Prince of Wales, who captivated us all, that he is the most courtly, the most amiable and the most smiling Lochinvar that has ever come west of the Lake of the Woods. He is the Western circulation man for the MacLean trade publications, and his duty is to visit every town, and every automobile dealer, tractor, and implement agent in that town. He told

M. T. I. Readers, meet "Bab."

me when I ran into him the other day on Portage Avenue that he sells the M.T.I. to fully 90 per cent. of the dealers he visits. In many, many towns he scores 100 per cent.

"THERE is nothing to it," "Bab" told me. "If I can get any dealer to look over this magazine for three minutes I have him sold. I have been told countless times that the policy adopted of printing the practical experience of dealers in the field is just what is required."

"Bab" took me to his room in the Blackstone Hotel, and we entered into a lengthy conversation on the contributing causes to this success.

"What the Western dealer likes," he told me, "is a trade magazine that can be conservative and solid in its make-up, and yet withal breezy and intensely interesting in its style. It's just like a Chinook wind in the early spring, after a hard winter, to get this paper instead of the typical dry-as-bones publications that have been more or less the rule up to date. There is life and punch and action in it. It is wide awake for new methods and new ideas. Why, I can sit down myself and enjoy 'most every article. When the latest copy comes in I am sold all over again, and I can go out and talk to the dealers with a conviction and eloquence that seldom fails to put it across."

And there you are. Personally, I found that almost every dealer I visited was reading MOTOR, TRACTOR AND IMPLEMENT, and the reason for this I discovered in your editorial in the November issue where you state that, in addition to the 2,400 subscribers you have put on, you have been circulating promotion copies to implement agents all over the country. There was a pressing need for this ALL-CANADIAN publication, which in its solution of problems, its inspiration for service, and in its every effort to help the dealer make more money is bound to be of vast benefit to the trade.

On this your first Christmas celebration I bring you warmest greetings from the far-flung West.

MOTORS SAVE ENGLAND

MOTOR lorries saved England from starvation a few weeks ago, in the opinion of a prominent British financier with whom the English representative of the M. T. I. was talking a short time after the collapse of the strike. Our correspondent quotes the financial expert as follows:

> "The strike situation here was handled wonderfully well, but do not think for a minute that the trouble is over. The strike leaders saw that they had misjudged the situation. Public sentiment was all against them. The motor lorry prevented the starvation that they had planned. In fact, I think it would be possible to carry on in this country without railroads at all. It has been done in the past and could easily be done again.
>
> "If they wish to make a successful strike in this country they will have to enrol in their labor unions every man that can drive a motor car. The volunteers greatly outnumbered the strikers but the end is not yet. I am sure they will try again. I personally think the Prime Minister handled the situation in a most admirable way and do not think it could have been done better."

DO YOU MEASURE UP?

AT the recent Implement and Vehicle Dealers' meeting, held in Chicago, a resolution was passed which sets the standard for a 100 per cent. implement dealer. This read:

> "The interests of all factors engaged in the manufacture and distribution of farm operating equipment, including the farmer himself, require a proper standard for measuring the value of the implement dealer. Such dealer should have a suitable place of business with an adequate stock to serve the community in which he operates; should have proper means commensurate with the volume of business in that community, of displaying goods in current demand; should carry a reasonable supply of repairs properly to serve his customers; should have a sufficient investment in his business that he may be able to perform the duties outlined; and should furnish the usual legitimate service necessary properly to promote his business, and conduct his affairs upon such basis as will assure permanency of business relationship.

ACCESSORIES

ARE you lining up your accessories for the spring? If not already done, now is the time to get started. The jobbers and distributors, as well as the manufacturers, have their catalogues practically complete—in fact, two or three are already off the press. Since the meeting of the automotive Equipment Association was held in Chicago, November 3-8, everything is clear as to what's what in the new lines; now is the time to get busy for a big year in accessories. On an average, a car should be equipped with $60 worth of accessories, Cecil Dixon of Hyslop Bros. has said. Are you ready to get YOUR share? Get the new catalogues and study them.

AND STILL THEY COME!

LAST month we were crowing because our subscribers had grown to number 2,383. We got in wrong with the Circulation Manager by mentioning this figure—*because it was two weeks old*, he said. As we go to press this month the total has jumped to 2,720. We'll get that 3,000 by January 1, you bet.

ROSENHEIM TAKES THE FAMILY FOR A RIDE

Pinched (With Permission) From "Timken Magazine." Sketches by CLYDE E. DARR

Mommer

Poppa

"YOU are sure now, Mr. Rosenheim, that you understand the mechanics of the car thoroughly?" said the salesman, as he slowed down the machine and stopped in front of the residence of Max Rosenheim, proprietor of the Scotch Woolen Mills, High Grade Men's and Boys' Clothing.

"Nothing you can tell me more. Me, I got a mind, understand, which is like them blue prince for gettin' the details. The fellow what sell me my pencil sharpener say right before my face already that never have he seen such a man what could learn all about machinery so quick as me. Honest, he only show me how to operate it mebbe a dozen times or so and I pick it up so quick that I spoil nor more as a gross before I run it perfect. Just you show me once more how you make it start, and then I think I take Rachael and Abie and Rebecca a ride, yes. Hey, Abie, tell your mudder we go for a ride."

Mike

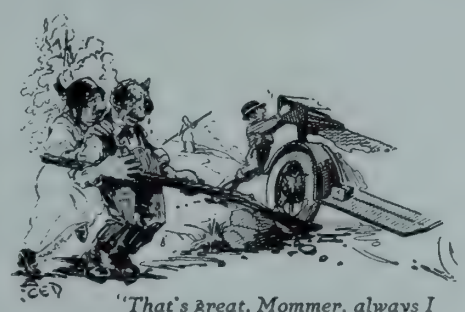
The salesman patiently gave instructions for the twentieth time regarding how to start and stop the car, being volubly assured that the whole proceeding was absolutely clear.

Abie came running down the walk, yelling, "Mama, she aint ready yet, Pop. She says for you to practise running around the block before we get in."

"All right," said Rosenheim, as he seated himself at the steering wheel and looked doubtfully at the array on the board. He turned his head, and with a sigh noticed that the salesman was far down the street.

"I bet me a dollar that Rachael has been ready for an hour, but she is a suspicioner that I can't run the car. Now, I push down the lever here, so. Then I pull this one so, and speed up the motor, so. Ah, hah, aint it fine? By golley, I move all by my selluf. Hey, Cohen," he called to a neighbor who was watching the proceedings with interest. "Why don't you get you a motor car? Never do I have so much enjoyment as drivin' my machine—so easy it is." Here Rosenheim took both hands off the steering wheel for the purpose of accenting further remarks to his neighbor, and the car, left without a guiding hand, began zig-zagging along the road colliding at last with a Greek banana peddler.

ROSENHEIM grasped the wheel again and moved rapidly down the road, followed by Cohen's derisive laugh and the peddler's curses in fluent Greek. Turning the corner he found was very easy and after circling the block four or five times, he saw his wife with Abie and Rebecca waiting for him. Here Rosenheim's memory failed him as he vainly tried to recall how to stop the car, and he shot by, yelling that maybe by the time he came round again he could let them get in.



"That's great, Mommer, always I say you should take more exercise"

"Max," called Rachael, after the fifth turn, "Is this one of them non-stop runs or is it to be a family party? Automobile rides I like, but I ain't built for catchin' 'em like a rider in a circus," but Max was beyond hearing for the rest of the lady's utterance.

"Rachael," called the sweating Rosenheim, as he approached on the eighth lap, "go by the house and get the book and read me the durreckshuns, or telephone me hellup. Such a memory a man has gotta have, oi, oi," and he was gone again.

The book was quickly found and on the eleventh round, Mrs. Rosenheim yelled, "Max, put it the foot down on the left peddle, close throttle and step on foot brake. Max, do you hear?"

Rebecca

Max nodded, jammed his foot on the accelerator and the car jumped like a frightened horse. As he approached again he yelled, "Rachael, you got the wrong page. Understand, I wanta stop. Find me the way, oder I look for something cheap and believe me, I stop it quick."

Again Rosenheim was told to step on the left pedal, and fifty feet from the gate he managed to get the right connection and the car stopped gently in front of the house.

"There it is, Rachael. Always I say give me time and I understand anything. Rebecca, you and your mother you set in the back seat and I take Abie in here with me. When Abie is a little older and learns to run the car as good as me, then me and mommer we sets in the back seat while he drives. Hey, Abie, take your hands off that lever. Now, all iss ready—here ve go."

THE car, however, refused to start. "Vell, vell, now vat's de matter? You push down the clutch, so, you pull gear shift lever, so, and away we go—not. A liar was the man who sells me this car. Two minutes ago I do this just this way, and look at it now."

A liar was the man who sells me this car"

"What's the matter, Mr. Rosenheim, can't you start?" asked a young fellow who had been watching while Rosenheim fumbled with the buttons and levers. "Oh, I see what's the matter, you've forgotten your ignition."

"Did I? Where could I have put it? Abie, like a good boy you run in the house and look for some of them ignishuns, I think you find 'em in der ——."

"No, no, here it is, see? The switch was turned off. Now it is all right."

"Abie, mebbe you think it was a joke, but if you want to ottermobel ride, keep your hands off of things what you don't understand. Wait till I explain 'em. Young man, much obliged. I find it in another minute myself, but just the same I give you five per cent. discount on any suit of clothes in the store. Vell, here we go."

The car glided forward, gaining in speed until the dial showed twenty miles an hour. "Max," cautioned his wife, "remember we ain't in a hurry to get anywhere in perticular. Don't go so fast that people can't recognize us. And say, Max, if you meet anybody and want to talk, don't wave your hands like you generally do—look out for that dog ——." Scream.

"Rachael," called Max over his shoulder, "Never should a woman talk while her husband is driving. Now I bet me I have to pay mebbe fifteen dollars for what was a medium-priced dog when he was alive, if that feller got our number."

"Look out, pop, for that cat."

"Never did I like cats anyway," said Rosenheim. "But next time, Abie, you'll holler sooner. I hope it wasn't a pet."

ROSENHEIM'S nervousness gradually disappeared as they whirled along the level road, and although he had several close shaves in passing other machines, he grew more confident as he noted how easily the direction of the car changed with the slight turn of the wheel.

About four o'clock, Mrs. Rosenheim leaned forward and said: "Max, already we are sixty miles from home, and besides nobody knows us here. I think it time to turn around and go back. I like it these rides but small satisfaction I get if Mrs. Cohen and Mrs. Arnheim and the rest see us not."

"All right, Rachael, Now we go back." Rosenheim shut off the power and the car came to a standstill. After waiting a few moments, Mrs. Rosenheim remarked, "Max, is it you are thinking of buying property here, or what's the matter?"

"Rachael, have you got that book?" Start it I can and stop it I do like an expert, but so hellup me, remember, I cannot how to turn around."

"A fine ottermobel expert you are. How is it you expect to get home? By way of San Francisco and Paris, yes? I leave the book on the gate post, and if you don't get this machine headed for home in ten minutes, I take the children and ride on the trolley."

"Rachael, mebbe I ain't a Barnum Oldfool as a driver yet, but believe me, never am I puzzled along. If I had a wife what could remember to bring along a simple little book we could be going back now. But no, she forgets everything and expects me to handle this machine like I was raised in an ottermobeel factory. Come on and get out and I show you what kind of a head I got. Rachael, I'm going to turn this car around by liftin' the front wheels so ——" and Rosenheim endeavored to lift the front part of the machine."

"Use your head, Pop, like you said you was goin' to do."

"Abie, you shut up. Imperdent you get to me and I'll larrup you."

"You will not, Max Rosenheim. You touch that child and I'll leave you."

"Now, now, Rachael, Abie never yet got a lickin' by me and you know it. Abie, you get that fence rail. Now you and Mommer and Rebecca push so. Now again—she's movin'. There, now, some more. Such a fine family what I have. My, my, Abie, such muscles I never see on one so young. Never mind, Rebecca, Mommer will sew the buttons on again. That's great, Mommer. Always I say you should take more exercise and I bet this helps your health. There, that's enough. Now we start back."

RED faced, perspiring, with soiled and wrinkled clothing, Mrs. Rosenheim bundled the children into the rear seat, climbed in herself and looked daggers at her husband as he settled down behind the wheel.

"In that empty head of yours, Max Rosenheim, have you sense enough left to start this car forward?"

"Rachael, such a joke it was. All the time I knew how to turn it around, but I purtend not, so as to see what you will say. Then I think I would like to see if you could push the car around. Ha! ha! So funny you look with that fence rail."

Isadore

"Max, did I think you were telling the truth, soon enough would you find out how strong I am. And all that saves you from a broken head is that you are such a liar."

The car behaved perfectly upon the return trip and Rosenheim chatted gaily, but it was a monologue act to the finish, Mrs. Rosenheim, sitting up very straight with her lips firmly pressed together. As they slowed down in front of the house, Max said, "Here we are, Rachael, all safe home again after a fine ride. Now, when I teach you to run the car, you can take me to the store every day. So easy it is to learn that I think in a week I learn you perfect. You see, it took me no time at all because I got a head for things and when ——."

"Max Rosenheim," said his wife, as she wearily lifted out Abie and Rebecca. "It's a wonder we wasn't all killed already. You have a brain for machinery, yes about enough to show you how to turn around in an office chair. As a showfeur, you're a good clothing salesman. Come children, I want you to get four or five hours' sleep while your paw is putting the car in the garbidge."

"Rachael," said Rosenheim, after he had the machine safely housed, "I take it apart and such a grand bargain we have already, Honest Kid tires, dizzy clutch, Timken axshels and everything what is on a high-grade ottermobeel. I think I need that book in the mornin' though, when I try me to put that car together again."

Abie

COMING AUTO SHOWS

MONTREAL. — January 17-24. Annual Automobile and Truck Show, under auspices Montreal Automobile Trade Association.

Western Canada Dealers Want

SHOWDOWN ON IMPLEMENT MARGINS

WHY? BECAUSE:

1—Cost of Operating is 18%;
2—Many Margins Run From 2% to 14%;
3—There Should be a Profit of 8% Above Overhead;
4—The Implement Dealer MUST Live!

F. E. RAYMOND

By G. H. SALLANS

AMONG implement dealers, particularly in the Canadian West, there is a gradually increasing feeling that a showdown is needed on the implement question, insofar as margins allowed to dealers are concerned. Nor is this impression without justification in actual figures, which show that dealers are operating at a distinct loss throughout the West—anywhere from 2 to 14 per cent. on sale receipts, according to the article considered.

The unanimous conclusion of dealers who have been in this implement business for years, and understand it, is, after careful study, that the cost of operating business, to the retail dealer, is eighteen per cent.; whereas the margin allowed by the companies is anywhere from 16.5 per cent. down to 4.5 per cent. With the overhead at 18, it is easy to see where the feeling comes from.

At the last general meeting, (May, 1919), between the dealers and wholesalers in Saskatchewan, this and other matters were taken up, but the wholesalers could, of course, take no definite action without the endorsation of the manufacturers. They agreed to make recommendations, however, and there the matter has stood.

One of the most important changes desired by the dealers is with regard to the time allowed on notes. At present a dealer can give his company a note on account, which they can keep for six months to ascertain its validity, and at the end of that time return to the dealer.

The dealers, represented through the Retail Merchants' Association, considered this too long, as by the time the note was returned as no good the dealer was also "out of luck" to collect. The dealers advocated, in a resolution, one month as the time.

Several wholesalers agreed to make recommendation for a period of from three to four months, and there the matter rested.

F. E. Raymond, Saskatchewan, Secretary of the Retail Merchants' Association, says that the matter will eventually be taken to the Government, via the Committee of Agriculture. If the Committee can or will do nothing, then the dealers will refer the matter back to the wholesalers and manufacturers.

To Mr. Raymond, the M. T. I. is indebted for a few facts and figures which may go to show just where the retail implement dealers stand in the matter of margins and profits. But first, it might be well to call to mind that the implement dealer is just as much an integral part of the community as the retail grocer.

True, the farmer can use the mail order—and he does. But if he has a break-down he needs the retailer, and needs him badly. Especially is this so if, as is often the case, he has a break that holds up a threshing gang of twelve or fifteen men, and must have repairs at once. He may have bought his machine in Jerusalem; but that won't help him when it comes to repairs—and these latter can never be provided for ahead of time. It is always the unexpected that happens, and that unexpected is just what the implement dealer should have in stock.

THAT the situation is the same in United States as in Western Canada is quite evident from statements issued by dealers, and in clippings from American magazines dealing with the matter.

The situation can be most aptly summed up in six resolutions, which were passed at a meeting of wholesalers and retailers in Regina on May 12 last. In brief, these are:

That the average cost to sell implements is at least 18 per cent.; these figures being based on experience of those who have kept a careful record in this connection.

That 8 per cent. in excess of cost should constitute a fair profit in cash dealing under wholesale contract.

That we deplore the tendency toward doing away with the wholesale contract. In our opinion there should be a spread of at least 5 per cent. of invoice price, shipped wholesale or consignment contract, both with the same cash discount.

That the company alone should not be the sole judge of the financial soundness of the customer at the time of sale, and that the period in which company may charge back such notes be limited to not more than thirty days from the date such is received by the company; and in the event of its being rejected and charged back, the agent should have the privilege of settling at the wholesale price of the article involved.

That on consignment contract the dealer should have the right of discounting notes before October 1, at 5 per cent. below invocie, losing his cash discount.

"If implement prices are high," stated Mr. Cowan, M. P., in the House of Commons, reviewing an inquiry conducted by the Retail Merchants' Association, "the fault cannot be laid at the door of the retail dealer in Western Canada, as I shall show.

"The cost of operating a retail business averages approximately 18 per cent. of the sales turnover. This figure will be conceded as not excessive; as a matter, of fact, it is the result of striking the average of a number of implement businesses of varying size and character in varied localities of the West.

"It is further confirmed by researches made by implement journals in various Middle and Western States of the Union where the conditions are somewhat similar to our own. This figure does not include freight paid to bring goods to salesrooms; freight is considered as part of the cost of goods in that case.

"Let us take another example; the case of a 3½ by 3 wagon, 28-in. box Y and T; prices in October 1 dating both ways, figured on basis of factory and Regina prices, freight being figured on average haul for local points in the Regina zone.

	1914	1918
Cost factory	$85.00	$133.50
Freight, etc.	13.25	17.50
Laid down	98.25	141.00
Sale price	116.00	152.00
Margin	17.75	11.50

Percentage sale price, 15.30 per cent., 7.00 per cent."

THESE figures need no explanation. They show a decline to less than fifty per cent. of the margin allowed the dealer; the margin he must keep if he wants to compete with the mail order houses.

Or take the case of an eight-foot binder. In 1914, the factory price was $127, freight, $11.50, landed cost, $138.50, sale price $170; margin $31.50 or 18.52 per cent. In 1918 this binder was: factory price, $218, freight, $15; landed cost, $233, sale price, $254, margin, $21 or 8.26 per cent.

These figures are on a Regina basis. Take from Regina to outlying points in the Province: Regina price in 1914, $141, sale price in outlying points, $170, margin $21 or 12.35 per cent. In 1918, Regina price, $232, sale price, $254; margin, $11.40 or 4.49 per cent.

In nearly every case the percentage has shrunk from its low 1914 basis to an appallingly low basis in 1918, and 1919 is no improvement in the situation, although statistics have not yet been available for this year. A sum up means an advance during the four years in factory price of 71.65 per cent., Regina basis, 64.53 per cent., and customer, 49.41. The dealer has paid the difference in cost, not the customer.

Or take a twenty disc seed drill. In 1914 the Fort William price was $100; landed in Regina, $116, sale price, $145; margin 20 per cent. In 1918 the same drill at Fort William cost $196, landed in Regina, $212; sale price, $237, with a margin of 10.33 per cent. or very little over half. The advance in price to dealer was 96 per cent. and to customer 63.79 per cent.

In North Dakota the wholesalers sell direct to the dealer; and the dealer, with an overhead of a little more, 17 per cent., adds a 20 per cent. margin, figuring it part of the cost. A few prices might be quoted, which do not conform exactly, however, to this figure. A gang plow, wholesale, is $120, retail, $155; double disc drill, $190 and $235; binder, 8-foot, $215, and $255; fanning mill, $33 and $45. These figures will easily show the profit, after adding the 20 per cent. margin to wholesale prices. On tractors the discount is 15 per cent.; wagons, 15 to 20 per cent. Prices are based on time sales, with 5 per cent. discount for cash.

C. S. Brantingham, a machinery manufacturer, is quoted as saying that it costs the producer $3 to sell an article worth $1. If this is true in each case, then where does the dealer, who has the handling of it, come in?

Speaking on the thirty-day limit, the wholesalers contend that dealers should protect themselves, and suggest that the latter could do good association work in this connection.

To this, the retailers retaliate by pointing out that they are piling up indirect liabilities on account of the six month limit. It is a case of credit. If the farmer came to the wholesaler to buy direct, the wholesaler would have no six months to figure out whether he should accept the farmer's note or not. He would have to decide at once. So must the dealer—or take a long chance of losing the sale altogether. It is a matter of mutual sentiment. Why not compromise on a contract, say for sixty days?

Yes, but the wholesaler points out that this might lead to companies insisting on a cash payment, and

Yes, tractors make people happy. The girl in the picture is happy because she can run the tractor for her father, G. Robert Sparks, on his farm near Fort Pelly, Saskatchewan (Yorkton territory), and he is happy because his daughter can take the place of a man whenever the work pushes and labor is scarce. Mr. Sparks bought a 10-20 tractor last year, after his dealer had shown him how desirable it was, and he says he and his daughter have made a record, which he defies anyone to equal under the same conditions.

that would make it harder still for the dealer to compete with the mail order house. Then it may be said that the margin now is not wide enough to sell goods against this competition; the dealer, moreover, has to guarantee the notes for a long time ahead. No collector can say in October what the farmer's financial position was in March, or vice versa. Then comes the point: pay for the risk or relieve the dealer of the responsibility.

On repair contracts the dealer stands a still poorer chance. Often he can sell a binder for $200 or $240 in less time than it takes to sell a cog wheel worth 50 cents. On the average, the cash returns for repairs are no bigger proportionately than for the larger articles of machinery. There the dealer has the advantage of a quick turnover, but if the money is not forthcoming, the advantage reduces itself to practically nil.

WHOLESALERS hold that there is a high mortality in implement business, that so many agents are not business men. They advise agents to improve their office and display methods. Granted; the trouble is not mainly in selling the goods, it is in being able to sell them at the right price.

Take a set of harrows. One factory sells its harrows to the dealers for $35, and direct to consumer for $35.65. There is little chance to compete there. Again, dealers produce figures to show that the straight factory cost to Ontario dealers is lower than to Saskatchewan. If the Ontario dealer sells at 15 per cent. under the West, then the West can get only 2 per cent. over the selling price in Ontario, and that after paying the freight and cartage.

Figures compiled for four years, 1914 to 1918, show the scale of dealer's margin in binder sales to be 10 per cent., 9.2, 7.6, and 6.23 respectively. The average overhead has been 18 per cent. The wholesalers admit it is low, but they point out that the dealer is concerned merely with setting up the implements, and has no financial outlay to pay dividends on. But that doesn't alter the fact that his work costs him 18 per cent. of sale price.

The Retail Merchants' Association, on investigating, has found that, contrary to belief generally, implements are as high priced to the consumer in the United States as in Canada, and in some cases higher.

Figures prepared by W. J. Keller, an expert implement man, in Shaunavon, Sask., have also been available to the association, and show that the Ontario farmer buys his goods at less than the Western dealer pays for them. For example, a Cockshutt disc implement costs $11.50 more to the Western dealer than to the Eastern, and added to this is the freight. As a matter of fact, to break even, the Western dealer should buy for $10.50 and freight less than the implement actually costs him. A Massey-Harris binder in 1918 cost $238, allowing a commission of $28, making 1 per cent. more for sales alone than the Western dealer gets for assuming the responsibility of collecting.

As to the legality of dealers in the West adding to their margin, the opinion of a Regina law firm is that, according to the Implement Act, the dealer buying on a straight wholesale basis can sell at his own retail price. He can also charge for the cost of express and wires for ordering any repairs on short notice.

A. G. Hogg, of Moosomin, Sask., is of the opinion that the present wholesale contract is all one-sided. The dealer has to finance the business from one year's end to another, he asserts. In this connection, W. J. Keller states that on seven lines of implements, cash basis only, there is an average margin of 17 per cent. Five per cent. of sale price is, of course, deducted for cash sales. A further statement shows that the advance in a certain make of drill during three years has been from $127 to $150, selling-price, cutting the dealer's margin from $27 to $10. During these three years his average overhead was 18.13 per cent., average profit, 6.83, so that the margin would have had to be 24.96 to bring him even. His profit the first year was 8.7, second year, 5.3, and third year, 6.5 per cent.

AT present there are upwards of 150 dealers holding membership in the Retail Merchants' Association, and this organization is taking a most active interest in their welfare. If the Government can do nothing, then the Association will take the matter back to the wholesalers, states Mr. Raymond.

It is interesting, after all, to see just how dealers make up their 18 per cent. overhead, on which figure they are unanimously agreed. This has been rather a difficult summary to make, and requires the most careful bookkeeping; but the following figures are available for Illinois:

Rent, 2.12 per cent.; salaries, 9.41; advertising, 1.22; heat and light, .51; delivery, 1.06; supplies, .42; insurance and taxes, 1.04; general expenses, .71; depreciation and shrinkage, .62; bad debts, .33; total, 17.44 per cent.

These figures are applicable to Western Canada, generally, states Mr. Raymond, who has studied the matter from all its angles, except that here the percentage is slightly higher, owing to the fact, perhaps, that the country is more thinly populated, the turnover a little slower, and, in many cases, the volume of business not so large.

By the figures, also, it is evident that the larger the volume of business, the lower will be the salary percentage, for three men could handle, with ease, twice the volume of business that two could in various lines.

As far as the tariff is concerned, at the beginning of the 1919 season, a dealer who had a house on either side of the international boundary line, on checking up, found that to make the same profit on each side, his combined selling prices for seven articles, an 8-foot and a 5-foot binder, a drill, a set of disc harrows, cream separator, gasoline engine, and gang plow—were $137 higher on the Canadian side than on the American, to balance the profits in sales of the same articles. Whether or not this could be attributed to the tariff is another question, and might make an interesting article in itself though more or less from a political point of view.

Boost For Bigger Margins

This is the fifth article showing the dire need for an increase in the margins allowed on the sales of agricultural implements. It is planned to run one, and perhaps more, in early issues of the M.T.I., so intense has been the interest aroused. As we go to press, the Editor received a four-page, closely-typewritten letter asking the M.T.I. to keep up the good work.

Trying Out Branch Garages

By F. H. SWEET

SOME speak warmly of branch shops, others are skeptical, and still others have tried and abandoned them. It depends considerably upon the location. Each dealer must decide this matter for himself. Here is an account of one try-out.

While the consolidated shop was located practically in the centre of the city, there were a good many complaints from customers on account of the distance from them. It was true that it was somewhat inconvenient for those on the edge of town, but the site had been selected with the object of serving all equally and on the theory that all of their customers would come to the business section for their service.

A number of independent shops had sprung up, especially in the residence districts, and some of these took away quite a slice of the business for a time. This worried Mr. Kimler and some of the other dealers to such an extent that the subject of branch shops was first taken up at one of the meetings, and after several conferences the new project was approvd.

SOME of the dealers claimed that their customers in certain neighborhoods stipulated that their service should be given by some shop in their immediate vicinity. These dealers declared that they had lost sales by not being able to comply with these requests. This seemed reasonable, and it was desided to open four branch houses, one in each general direction. Mr. Kimler's foreman, Bill, did not seem to think much of the scheme, but Mr. Kimler was in for it. So it was finally agreed that a test seemed to be the only way of determining whether or not the plan was good.

Bill picked out and trained four foremen and crews. An office man was assigned to each branch. The general operating methods and practices of the main shop were modified to theoretically work on a smaller scale, the only difference being that each individual had to handle several jobs. The office man had to be bookkeeper, bill clerk, cashier, parts man and accessory salesman. The foreman had to be foreman, primarily, and final tester and also keep an eye on the stock room.

The plan was due to fail from the start. The overhead was enormous. But of the four foremen only one really qualified.

Only two of the office men were able to keep up, and these did it by working night and day. Bill also worked enough for three men. He kept driving from one place to another, directing, instructing, and even helping with the actual work when the branch seemed about to be swamped.

With all this and the best supervision they could give them, the branch shops never paid, and to the surprise of everyone, except Bill, they were not popular. The very customers who had wanted them most did not really patronize them. They would stop for gasoline and oil and perhaps for minor adjustments or small accessories. But every time when they really wanted anything worth while they would drive straight to the main house.

BILL never kicked and gave the best that was in him. But after about three months, however, Mr. Kimler threw up his hands. The dealers were complaining more than ever. Their customers were trying to get service from both the branches and the main shop. It was impossible to carry a full line of parts and accessories at all of the four branch shops. The lack of complete lines made it necessary to be continually sending down town to headquarters, which was not only expensive but caused serious delays and resulted in much grumbling from customers.

"I am in favor of closing all of the branch shops," Mr. Kimler said at one of the meetings about this time. "The only reason for not doing it is because the independent shops will take away a good deal of business that is rightfully ours.

"We don't want to be hogs," he continued. "But we believed we have worked out a plan that will prove itself to be of as much benefit to the customers as it promises to be to ourselves. I hate to give it up."

The other dealers in the organization had become convinced that the branch shop plan would not work, so were willing to drop it. A statement of the various branches' business had to be read and it showed a considerable total loss. Bill finally clinched the matter by pointing out that the independent shops were always changing hands and that there must be a reason.

"And the reason is," he said, "that they are not making a go out of it. We undersell them on accessories and do not give them any discounts on parts. We are doing shop work at as low a rate as it can be done, and if they are doing it at any less they are losing money.

"Of course one or two good mechanics can rent a small place and by doing the work themselves, can make good wages, but that will not hurt us. Let the other fellows alone, and sooner or later they will be pretty apt to close their doors."

This settled the matter, and the branches were closed.

U.S. TRACTOR SHOW

THE big annual tractor show in the United States will be held again next year, at Kansas City, February 9-14. This Winter Show, held last year in a huge building erected specially for the occasion, has attracted a great deal of attention, and has been more instructive and useful than most of the "out-door" meets. The Kansas City Tractor Club expects that many new models, or adaptations, will be shown.

Hauling In the Cash:
Getting 100 p.c. Results

IF you were an Implement Dealer
AND
You sent out 104 notes for settlement through the mail
AND
In a week eighty were returned *with the cash*
AND
In a month 101 had brought in the dough;

You'd think that pretty fair business, wouldn't you? That's the story which W. J. Allin, of the Allin Agency, 27 Market Square, Chatham, Ontario, detailed to the M.T.I. editor a few weeks ago when our staff was attending the Western Ontario Tractor Meet, and it's such a high percentage of collections, at such an infinitesimal cost—no outlay except postage and paper—that we think it is well worth passing on.

Early in the fall Mr. Allin sent out 104 notes, accompanied by a very simple communication requesting settlement. The results you will see given above.

"Why get out in a car or buggy, and drive scores of miles through the country, when you can get results by letting His Majesty's Mail do your work?" asks Mr. Allin. "I have followed this policy since I started business a year and a half ago, and find it works like a charm. The three settlements which were not made were due to no fault of the man owing me the money. They were caused by temporary misunderstandings.

" I have several French clients and it is interesting to note that no persons settled more promptly than they did."

"How much business was involved in the 104 notes?"

"More than $10,000," replied Mr. Allin.

The form of missive making the request for payment is shown herewith. Very simple, isn't it?

CHATHAM, CANADA 19

.....

.....

Dear Sir:

We herewith enclose notes for your signature covering one.....supplied you as per your order of.....

Please sign and return the notes in the enclosed stamped addressed envelope by first mail and oblige

Yours very truly,

THE ALLIN AGENCY

Per.....

This is the communication. Its full size is 8½" x 7".

Next Season

By E. H. SCOTT

IT may seem at first glance a little early to talk of next season's prospects in the Implement trade in Western Canada, but in view of the fact that dealers are placing their orders with the manufacturers for spring business it would appear that such a subject is most appropriate.

I was talking the other day to the general manager of one of the largest implement firms represented in the West and he told me that it was not only his personal view, but the view of his managers at branch headquarters in Western centres and the men on the road that the 1920 season would be one of the most prosperous the trade has ever seen.

"Every condition favors a big year," he said, "and with production impeded by the steel and coal strikes in the United States, as well as by the unrest in industrial circles, the wiseacres will get their orders in early for the full season's goods. One thing is certain prices are not going to drop—they are more likely to go higher. In some lines it will be impossible to supply the demands of the trade.

"There are several reasons why there is certain to be a great increase in business," said this official. "In the first place look at the huge amount of land that is being sold. Pick up the *Manitoba Free Press* any morning and you will find from one to two pages of condensed advertising of farms for sale. There has not been anything like it since the palmy days of 1912. With high prices for grain still maintained there was a very marked increase in acreage under crop this year, but next season the figures will far exceed those of 1919. Not only are the farmers increasing their holdings with the big profits they have been making, but there promises to be an unprecedented influx of settlers from the United States. They can sell their land there for $200 or $300 an acre, and make a wonderful start on wild land here at from $15 to $30 an acre.

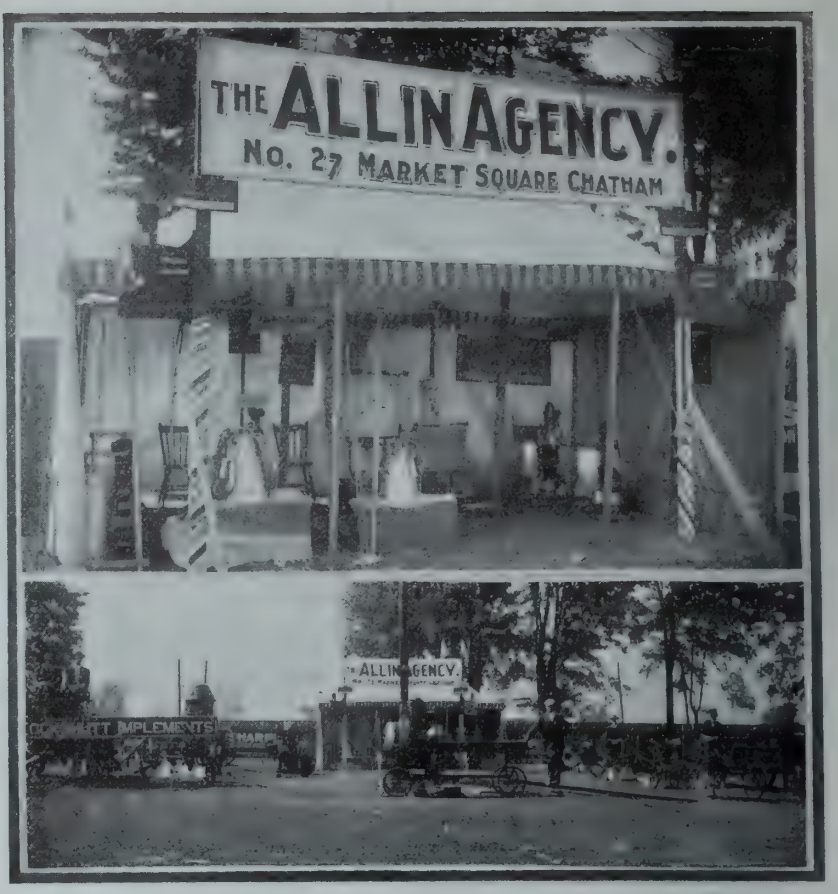
"THEN look at the conditions in the West as they are to-day. This year there was a very extensive crop failure in Saskatchewan and Alberta, notably in the Southern portions of those provinces where the failure was almost complete, and in some sections of which there have been three or four crop failures in succession. In Manitoba there was an excellent crop, except in some portions of the south. The West comes back streng. Its spirit was undaunted by the poor crop in many parts, and with typical energy the farmers went ahead to summerfallow the ground, preparing a vast area of old and new land ready for the 1920 crop.

"All over the West the harvest came in about three weeks earlier than usual with the result that all records went by the boards in the early marketing of the grain. The result was that the farmers had almost eight full weeks for fall plowing, and added a mighty acreage to the summerfallow in preparation for the seed in the spring. Then came the "Million Dollar" snowfall early in November with the ground right through to the foothills covered with an average depth of two feet of snow, ensuring even at this early date an abundance of moisture in the spring.

"Now there are going to be a lot of new implements needed to work this land, and harvest the great crop expected, and the 'hold back' attitude of the farmers in recent years waiting for prices to drop intensifies this need. They have waited to the point where they cannot wait any longer, and they are beginning to get wise to the fact that there is going to be no drop. It does not take a farmer long to realize that working with inadequate tools will not get him very far. Those broken-down plows and harrows and seeders have pulled him through another season fraught with endless delays for repairs, and poor work, and he has just about got to the stage where he is willing to gamble the price of some new equipment that at last there is going to be a bumper crop.

"THEY will tell you, those pessimists, that the farmers in the drouth districts have no money. The only answer I have to make to that is look what they did in the recent Victory Loan Campaign. Almost every district over the top and beyond. They have the money, and they have confidence that next season is going to land them somewhere. They are going to buy implements.

"If I may venture a word of advice," said the general manager in conclusion, "it is that the dealers should get right after their customers now for next season's needs. They have the talking points of shortage of production and mounting prices to work on, and they can urge that it will be a case of first come first served. The farmer is naturally a forehanded man. He waits 12 months for a crop. Such arguments should appeal to him."



At the Chatham Fair the Allin Agency was right there with a splendid exhibit. You will notice that there were two exhibits—an interior and an exterior—and both very attractive to prospects.

"Yes, Jess!"

THERE was a long distance telephone call for the manager. Automatically he reached for the telephone and removed the receiver.

"Yes, what is it?" the manager inquired.

"Where are those implements I ordered at the Topeka fair?" boomed a voice over the long distance wire.

The manager removed the receiver to distance of about eighteen inches away from a vibrating ear drum and then asked, "Who is this speaking?"

"This is Jess Willard," came the reply in the same strength and tone.

"They are on the way, Mr. Willard," hurriedly advised the manager, at the same time placing the receiver on the hook and ringing violently for the shipping clerk.

Manager F. H. Turner, of the Kansas City, Mo., branch of the B. F. Avery & Sons' Plow Co., feels fairly safe now, however, for he has received word that a shipment of power tillage tools has been received at Grantville, Kan., which is near the Jess Willard ranch.

CANADIAN COMPANY WILL MAKE TRUCKS

Dealers Will Soon Have a V.C. Calling on Them to Sell Product of Eastern Canada Motor Truck Company

THE Eastern Canada Motor Truck Company, Limited was incoroporated in March, 1919, with a Federal charter, and capitalized at $500,000. The company will manufacture "Veteran" truck and trailers at their plant in Hull, Quebec, which is now in course of erection. The first product of the company will be a truck with two-ton capacity, to sell at a moderate price. Production is expected to start early in the year 1920.

The organization of the company is entirely Canadian, with Canadian capital. The officers are: Pres., A. K. MacCarthy; vice-pres. and gen. manager, G. Gordon Bell; sec.-treas., T. W. MacDowell. The directors of the company are prominent Ottawa and Montreal business men—T. F. Ahearn, Ottawa; Dr. G. S. MacCarthy, Ottawa; F. E. Bronson, Ottawa; Thomas Arnold, Montreal.

Major T. W. MacDowell, V.C., D.S.O. A. K. MacCarthy, M.E. Capt. G. G. Bell, D.F.C., etc.

The following particulars regarding the officers are interesting:—

T. W. MacDOWELL, graduate University of Toronto; late Major 38th Battalion, C. E. F.; D.S.O., Somme, 1916; V.C., Vimy Ridge, 1917.

A. K. MacCARTHY, graduate in mechanical engineering, McGill, 1906. Superintendent of Cape Breton Electric Railway, 1906-1909. Manager of Levis County Railway, 1909-1919.

G. GORDON BELL, late Captain R.A.F. After attending McGill University, spent several years in various automobile and truck factories in the United States prior to going overseas in 1915. After several months in France with the 38th Battalion, C. E. F., as machine gun officer, he joined the Royal Air Force and saw service in France, Egypt and Salonica, receiving the following decorations—Distinguished Flying Cross (British); Chevalier of Legion of Honor (French); Croix de Guerre with Palm (French).

AGGRESSIVE SALESMANSHIP WINS

By F. H. SWEET

IN a certain prosperous agricultural section a new dealer secured a tractor and accessory agency, and in one season, according to reports and his own statement, sold nearly 100 tractors. The amount of accessories sold were not stated, but hinted as being proportional.

Up to that time the belief was that not more than sixty tractors altogether were in the territory. This dealer's success was attributed by business men of his community largely to aggressive salesmanship, He "went after" the farmers energetically and brought home the business. One method which he found profitable was to load an outfit on a truck, go out to the farm of a prospect, and plow a few acres. With this informal demonstration he would make an impression upon the farmer and pave the way for a sales talk and possibly a sale.

Before th enew dealer began business in the community tractors had almost sold themselves. Different kinds of advertising had helped by rousing the farmer's interest, but in the majority of sales the prospect figured out the advisability of purchasing a tractor before taking up the matter with the representative of any make of machine. It speaks well for the tractor that can sell itself in some instances, but in these days when salesmanship is exerting such a dominant force in business, influencing demand and guiding the direction of expenditures, the method of letting a machine sell itself is too slow. More aggressive salesmanship is demanded.

THIS does not mean multiplication of agencies in a territory and an attempt to unload a certain number of tractors in each section. Salesmanship should aim to supply the buyer with things he can use profitably. Applied to the tractor business, this kind of salesmanship should make an effort to give every farmer who has a farm adaptable to the tractor a chance to learn of its use and advantages, and why it would not pay him to own an outfit. Where a multitude of other things are clamoring for the farmer's attention, this naturally will require intelligent, aggressive effort. The incident mentioned demonstrates that this effort pays.

Following is a rather interesting contest between tractor and horses. Mr. Brown went out early in the season to convince a farmer in his territory that a tractor would reduce operating expense on his 280-acre farm. He found his prospect exceedingly skeptical. As the two men looked over a 24-acre stalk field that was to go back into corn, for another year, Mr. Brown pointed to it and said: "I can go out into that field with my tractor and plow it up in twenty-four hours."

The old farmer turned for a moment to watch his hired man plowing in the rough soil of another field with three big, husky horses, which were not pulling very steadily, then he shook his head. "I don't know," he replied. "It's an easy matter to make such a statement, but it would be pretty hard to back it up."

"All right," returned Brown. "You split that field in two parts, and I will come out and plow against three men and nine of your horses, and the fellow that finishes his half first will get the other fellow's outfit."

This was too much for the farmer, but he consented to enter a five-hour contest in order to try out the tractor. Brown agreed, and the time was set for the next Wednesday afternoon. The field was 80 rods long, and two portions of it were selected for the plowing match. Three teams of three heavy draft horses, which were good ones, each pulling a 14-inch plow, were matched against the tractor pulling two 16-inch bottoms.

ON the day of the event the drivers of the horses drew first choice of the field. This gave them a tract that was considerably easier pulling, because it did not have the grade which extended over part of the tract allotted the tractor. Three farmers in the community were selected as judges, and it was their duty to see that all plows were set and kept at a uniform depth. It was decided that the tractor should plow the ends the same as the teams.

At a given signal both outfits went to work, and at the end of four and one-half hours the allotted tracts were finished. When the final reckoning was made by the judges, it was found that the tractor had won over the nine horses and three plows by two furrows around the land, and the committee of farmers agreed that the tractor held first place in both speed and quality of work.

Then Brown pressed his competitor for a statement of the cost of operating his horse outfit on the basis of one day's plowing. The farmer submitted his figures, and upon a comparison of the cost with horses and those of the tractor outfit, a difference of $14.92 was found in favor of the tractor. Mr. Brown did not say whether his calculations for the tractor included interest on investment, depreciation, etc., or not, but the difference is so marked that these may not have been figured in. Nevertheless, the results of the contest left no doubt in the minds of the farmer spectators that the tractor could do better plowing at less cost than horses. After all the calculations had been made, Brown wrote down in his note-book: "Plowed 3.68 acres in 4½ hours, using 7½ gallons of kerosene and less than ½ pint of gasoline."

THE tractor has become an all important factor upon the modern farm. It has the advantage of permitting great concentration of power under one man. It effects a tremendous saving in horses and labor, and does more and better work than is possible with horses. While the initial outlay is somewhat greater than most men are accustomed to invest in a farm machine, the tractor readily makes for economical farming. The impression prevails among many farmers that tractors mean large repair bills, greater cost than when horses are used, and require a trained expert to run them. The fact is that accidents are more liable to happen when horses are used than when tractors are used. Wire cuts, sickness, sore shoulders, runaway, injury, perhaps total loss of the animal and harness, and shoe bills, are common items of expense and frequently rather heavy. This is proven by tests and investigations. One hundred farmers who complied with a request for information, stated that the average expense of eight horses per annum was $60, while the ninety-five tractor owners reported that the expense of their machine was less than $50, and the average $25. When gasoline was used, the highest cost per acre was $1 on clay land, the lowest 50 cents, with an average of 60 cents. For sandy soil, using kerosene, the cost ranged from 25 to 50 cents, with an average of 37 cents. This series of reports covered two or three bottoms, plowing nine inches deep.

Viewed from the standpoint of efficiency, upkeep, cost of operation, and depreciation, the tractor is far more economical to the farmer who is operating a tract of one hundred and fifty acres or more.

Auto Accessories For Christmas Presents

A. M. Bottcher Itemizes Some of the Accessories Which Dealers Can Usefully Display for Winter Sale

This suggestive article—accessories for Christmas gifts—is a right-up-to-the-minute idea. It's up to dealers in accessories to convert this into coin of the realm. You can do this in two ways:—

1—Make special "Christmas gift" window displays.

2—Write special ads. for your local paper, driving this home.

The M.T.I. Editor will be glad to receive copies of the papers in which any dealers run such ads.

"FEWER cars will be laid up this winter than ever before," said A. M. Bottcher, of Hyslop Bros., Ltd., Toronto, in discussing with CANADIAN MOTOR TRACTOR AND IMPLEMENT TRADE JOURNAL opportunities for the sale of automobile accessories during the winter months.

The automobile is an established economic factor in the industrial life of every community. Automobile accessory dealers have not been slow to realize this and they have gradually increased the volume of the year's business. But they have not always, perhaps, been as quick to realize that the automobile is increasing its use for a greater part of the year than it did when it was first used.

So many accessories have been introduced and such improvements have been made from year to year that cars can now be used almost with as much comfort during the average winter months as any other time of the year. In the articles and devices that have been placed upon the market, there is a big field of profit for hardware merchant. Automobile accessories for winter months make excellent Christmas presents. The Marshall Field Co. of Chicago, this Christmas, is making a special display of accessories for Christmas buyers and featuring them for those who are looking for something away from the customary lines of Christmas gifts.

"Prior to the war," said Mr. Bottcher, in discussing the whole matter, "a tendency had already developed, where motor car owners in northern climates were becoming more and more inclined to lengthen the operating period of their car, to increase the number being used all the year round. It was during the war, however, that automobiles, trucks and motor ambulances proved their absolute independence of weather and road conditions, whether abroad or at home, and demonstrated conclusively their reliability, expediency and even comfort when in operation during the cold winter months.

"Fewer cars will be laid up this winter than ever before. Even the ordinary touring car can provide travelling in luxurious comfort during the cold weather. With the top enclosed or any of the convertible types of enclosed tops mounted on an open touring body, it keeps out the cold air, rain or snow. A good heater deriving heat from the exhaust may be installed at a nominal sum, and it is suitable for passenger cars or trucks. Warm lap robes and wool-lined gauntlets add to the comfort of the driver or occupants. Tire chains enable the car to be propelled along slippery streets and through deep snow with perfect ease and safety. Anti-freeze solutions and engine hood covers obviate the injury from motor freezing trouble.

"AGAINST this array of facts there can be no logical reason why a car should be put in storage for the winter. The time has come when motoring in all its phases can be considered an all-the-year proposition.

"Car dealers this fall and winter will receive a far larger quota of automobiles than during any previous corresponding season. They will be mighty glad to get them, after manner in which cars have been doled out to dealers this summer, and with customers anxiously waiting for deliveries—many for several months.

"With a record volume of fall and winter business in new cars it behooves the manufacturer, jobber and dealer of automobile equipment to be prepared to take care of the demand for equipment and supplies for same. Such goods are required when automobiles are delivered in the spring and summer, and they will be needed just as much when cars will be out on the roads during the cold weather, with the added advantage of making sales of specialties peculiar to the season to insure comfort and safety in operating the car."

HYSLOP BROS. have issued a fall and winter bulletin which is especially adapted to the requirements of the season.

If the hardware merchant who is in the habit of handling accessories makes a special display window of them, he might be surprised to find how they promote Christmas trade. There are many useful and inexpensive articles that make attractive Christmas displays. Some of these are non-freezing liquid freezometer, combination radiator and engine hood cover for various makes of cars, driving gauntlets or fur gauntlet mitts, foot warmers, engine heaters, fur motor robes. And there are many others along the same lines that have special use in cold weather.

Jobbers Meet In Chicago

CHICAGO.—The Automotive Equipment Association held an exceedingly interesting and well-attended meeting here November 3 to 8, at which nearly all the representative manufacturers and distributors of automotive accessories in the United States and Canada were represented.

Very few new lines were shown, but many firms who had not been on a production basis during the war, owing to the fact that they had diverted their plants to war uses, were again noticed. A huge amount of business was transacted, and large orders were being reported each day.

Though there were few untried lines shown, there was a large representation of accessories placed on the market comparatively recently, and which had had time to prove their merit.

The following Canadian distributors and manufacturers were present at the show—Hyslop Bros., Ltd., G. McWilliam; Canadian Fairbanks-Morse, Mr. Hopkins; Northern Electric, Mr. Johnson; John Millen & Sons, Montreal, J. E. Millen; Motor Car Supply Co., Mr. Cavanaugh; Kinzinger-Bruce, Niagara Falls, Ont., Mr. Kinzinger; Champion Spark Plug Co., A. J. Hayes; W. H. Banfield; Cutten & Foster, W. L. Moncur; Splitdorf Electric Co., Mr. Nelson; McKinnon Industries, A. L. McKinnon; Merrick-Anderson, Mr. Merrick; Lewis Bros., Mr. Fraser; Champion Ignition Co., Mr. Joyce; L. Gravel; Wood, Walker, Vallance, Ltd., Mr. Walker; Aikenhead Hardware, Toronto, Mr. Silvis; Alexander & James; Mr. Oliver; D. F. Johnson.

NEW CUTTEN AND FOSTER BUILDING

TO take care of their rapidly expanding business Cutten and Foster, Limited, Toronto, jobbers and manufacturers of automobile equipment, are building a new extension alongside their present premises on Church Street. The new building will be 50 x 120 feet and eight stories high, costing about $150,000.

Making Use of M.T.I.

THINK THIS OVER

Winter is coming and you do not use your car during the winter months. The time you don't need it is the time to have it overhauled. Isn't that right? Call and see us or phone 15, and we will call and see you. If you have a storage battery have us call for it and we will keep it in shape all winter for $5.00.

See us about a new body for that old Ford of yours.

Storage Battery Service - Vulcanizing
Expert Repairing

SOURIS MOTOR CO.

CEMENT BARN BUILDINGS **PHONE 15**

A FEW months ago a new Motor Co. opened a garage and repair shop in Souris, Manitoba. This isn't a very noteworthy fact in itself, because garages and repair shops are springing up like mushrooms from one end of Canada to another—and many of them last just about as long. There are between 4,000 and 5,000 from P. E. I. to B. C.

But the manager of the Souris Motor Co. saw an article in October M.T.I., advocating "Winter Overhaul." Business was very dull, and the article looked good to the Souris man, so he acted upon it. The ad. which you see here with, "Think This Over," was put in the local paper, after the sound advice given by A. M. Glover had been digested. Quick action was wanted, and so a local ad. was resorted to, instead of relying upon the longer process of follow-up letters.

And the result?

It is best told in the words of a representative of M.T.I., who dropped into Souris on business Thanksgiving Day.

"I discussed the idea of "Winter Overhaul" with the Souris Motor Co. manager, and he took to the idea, and immediately planked an ad. in the local paper. When I was in Souris during Thanksgiving Day week, the garage looked "painfully normal," but when I called around yesterday (October 24), on my way back to Winnipeg, the blame place was full up.

"On my asking: 'How's Biz?', he replied:

"Bizzern 'ell."

"It certainly looked it. Between the M. T. I. tip on 'Winter Overhaul' and their decisive action in putting the ad, in the paper right away, they sure got big results right off."

This is the kind of news it does the cockles of our heart good to receive. Any further information of results achieved after reading M. T. I. will be gladly received.

WHO SHOULD BE A PROSPECT *and* WHY?

By B. J. PAULSON

A LIVE dealer is like a good bird dog. If you are a live dealer you should feel complimented by this comparison. If you own a good bird dog you'll understand very readily what we mean—and will feel flattered accordingly.

A bird dog is a "prospect hunter" of a kind. He goes out for birds and doesn't waste his time chasing field mice or chipmunks. He knows what you are after—and he's after the same thing. He concentrates his efforts on the right kind of game—and invariably finds the game if there is any to be found. That's why he is like a live dealer.

The live dealer concentrates his energies on live prospects for machines and implements. He doesn't waste his time on "chipmunks"—the "prospects" that don't count. He discovers his game by attending strictly to business and keeping everlastingly on the alert and on the go—just like the bird dog. And he knows a good prospect when he sees one just as the bird dog will recognize a covey of prairie chickens when he sees it.

And that brings up the question: "Who should be a prospect and why?" Let's look into the matter.

THE first thing to determine is whether the would-be prospect has need for the thing you wish to sell him. If you sell him something for which he has no use, you are only storing up ill-will for yourself and losing right there and then any future business that you might have received from this particular farmer. On the other hand, if the man whom you consider a prospect has no need for the thing you are trying to sell him and refuses to buy because of that fact, and you still persist in pestering him in an effort to make a sale, considering this good, aggressive salesmanship—you are again doing yourself more harm than good. You are antagonizing the "prospect" and wasting valuable time in conversation which you might be spending profitably selling a *real prospect.*

To try to sell a tractor to a farmer farming forty acres of land, divided into small fields, is decidedly poor business. That farmer is *not* a prospect for a tractor even though he may want one. It would not prove a profitable investment to him. The live dealer immediately recognizes this fact and, instead of trying to sell this farmer a tractor, sells him a small motor cultivator.

A farmer who has a comparatively new binder, sold to him by one dealer, is not an immediate prospect for a binder from another dealer unless the binder fails utterly to work satisfactorily. However, he *is* a future prospect and the live dealer will observe closely what kind of service the farmer receives from the binder, the manufacturer and the dealer who sold it to him. Then, when the time is ripe, he is in position to tell the prospect wherein his product and service excels.

So the first essential in hunting and classifying prospects is to know the farmer's needs—not only what equipment he can use to good advantage, but also the equipment he already has. Some progressive dealers keep card index files on all the farmers in their territory, showing dates of purchase of different machines and the estimated dates when they should be in the market for new machines. On the same cards they also make note of machines and implements owned by the customer which may have been purchased from a competing dealer.

BY going through his file at frequent intervals the dealer can keep a very comprehensive check on the requirements of his customers. When a farmer is discovered to be in need of a new machine or implement the dealer makes out a "prospect card" which is placed in a separate file together with prospects referred to the local agent by the concern or concerns he represents. These prospect cards should indicate the nature of the machines in which the prospective purchaser is interested, whether he is a good, fair, or poor prospect, and notations of dates on which he has been visited by the dealer. This prospect file is the dealer's "potential sales" ledger and should be kept up just as carefully as his ledger of actual sales. The cards should be kept in this file, indexed alphabetically by names until the prospect is either sold or found to be out of the market, at which time the card should be removed and the proper notation made on the card in the general file.

While this may appear to involve a lot of extra detail work for the dealer, still it is not half as formidable as it sounds and it requires much less time to keep a record of a farmer's requirements on a card than to make repeated trips some miles into the country to see him.

By this, however, is not meant that the dealer should not call on his customer. To the contrary, he should spend as much of his time as possible trying to sell *live prospects*—and that's where the prospect file demonstrates its real value, for it enables the dealer to concentrate his efforts on farmers who are already in the market for machines.

THE second essential requirement of a good, bona fide prospect, is that he be financially able to pay for the machines or implements that he wishes to buy. A farmer may be a prospect in the sense that he is in the market for a machine— several machines, in fact --but if he is unable to pay for such equipment and cannot give good security as collateral on his notes on time sales, he should not be considered as a *real prospect.* Hundreds of local agents, and not an inconsiderable number of manufacturers, have closed their doors because of the fact that they made the serious error of selling heavily on "paper" terms that were purely paper—as good as worthless. Cash sales and short time selling terms should be encouraged as much as possible.

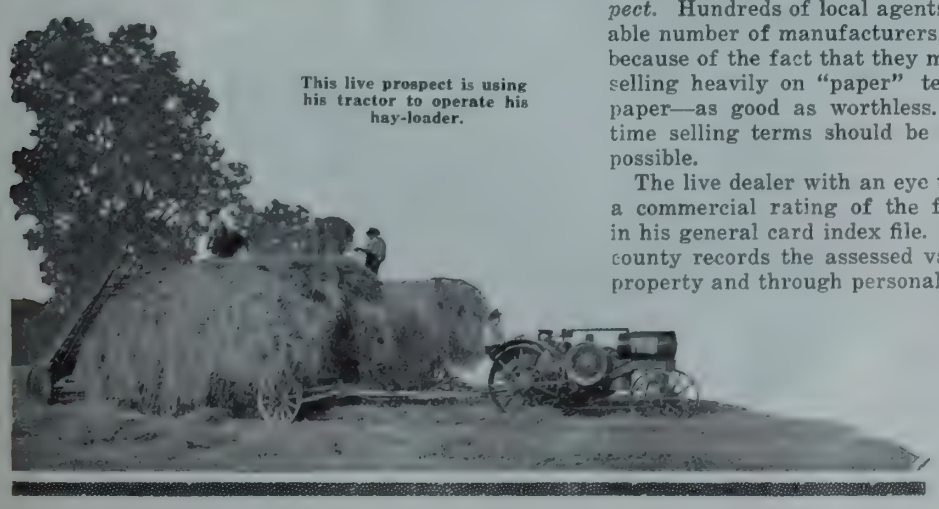
The live dealer with an eye to business system keeps a commercial rating of the farmers in his territory in his general card index file. He can secure from the county records the assessed valuation of the farmer's property and through personal dealings with the farmer he usually knows to what extent the prospect can buy without *over-buying.*

And so, the matter of who should be a prospect becomes a simple problem of elimination. The live prospect is the man who has need for the product you have to sell and who is financially able to pay for it.

But it's the good hunter who bags the game!

Tractor hauling hay into market.

Engine Salesman R. G. Borton, of Edmonton, Alta., pressed the bulb on this busy scene. The Titan 10-20 tractor and the 24-40 New Racine separator are owned by Julia O. Hussa, Sedgwick, Alta., who says that the small boy standing by the belt operated the tractor the first season. This stack of straw indicates that there ought to be about 1,000 bushels of wheat around somewhere to show for the work accomplished.



This live prospect is using his tractor to operate his hay-loader.

Getting at Net Profit

DO you charge up rental for all the real estate that you own and use in your business, just the same as you would if it were occupied by some other person?

Do you charge up to your business, a salary for your own services, equal to what you would have to pay anyone else for doing the same work?

Do you charge up a salary for any member of your family---wife, daughter, or son, for instance, who may assist you at times in conducting your business?

Do you charge up at the beginning of your business year, interest on the amount of your total investment, excepting of course your real estate?

Do you charge up for depreciation on all goods that you carry over and which later on you may have to sell at reduced prices?

Do you charge up for depreciation on your fixtures, buildings, general equipment, in fact anything used in your business that may suffer from wear and tear?

Do you charge up for taxes, insurance, water, light, fuel, delivery, postage, stationery, telegrams, telephones, and collection expenses?

Do you charge up for all donations, allowances bad debts, stolen merchandise and all merchandise not paid for?

After you have found the total of all the foregoing items make sure you are right by proving the figures with your books. The result, if correct, will be your total operating expenses for the year. Then divide this amount by the total of your annual sales and you will have the per cent. that it cost you to operate your business. If you take this percentage and subtract it from the price of any article you have sold, and then subtract from the remainder what the article cost (meaning of course the invoice price plus the freight), the result will be your net profit or loss on the sale. ---*The Goodrich.*

Big Export Field, Says M.A.T.A. Head

A GREAT field for American and Canadian automobile manufacturers in England and France within the next year or two was the message which J. O. Linteau, president of the Montreal Automobile Trade Association, brought back from a trip to Italy, France and England, and delivered to the members of the association at a surprise dinner tendered him last night at the Place Viger Hotel. The chair was taken by J. E. Millen, vice-president, and there was a large attendance of members.

While abroad Mr. Linteau visited the automobile expositions in Paris and London. He found that in both countries the supplies of home-made cars had been ordered up to 1921, and said that he had come across a case in London where a man who wanted an automobile had paid $5,000 to get the turn of a man who had on order a car due for delivery next spring. Otherwise he would have had to wait until 1921 for his car.

CASHING IN ON TRACTORS AND TRUCKS

By F. H. SWEET

WE have had three tractors on the farm, so I feel that I know tractors pretty well now. Trouble? Well, we have had our share—part of it was our own fault—we didn't know. Part of it was the tractor's—but they are made better now, and we know more, and the one we have to-day is always ready to perform. It gives first-class service.

Overheating? I have seen some tractors which did that pretty badly. The first one we owned five years ago did that a little after we had it a few months. We did not strain the water we used, and the dirt gradually plugged up the bottom of the radiator and stopped the water circulation. We strain the water now, try to use clean water, and drain the radiator every two weeks. We usually get some mud and dirt out when we do. Once the suction hose from the radiator to the pump flattened out. It had become old and weak, and when the pump would suck hard at speed it would flatten and shut off the water, causing the water in the radiator to boil even when the tractor was standing still. It was quite a while before we found it. We put a short piece of pipe inside of it to hold it out until we got the job finished.

One of our neighbors runs his tractors with a rich mixture all the time. I told him just before harvest that he would overheat his engine with such a mixture, and he surely did. When he would take that cap off the radiator the steam and water would spout up in the air like a geyser. Our wheat was early that year, and I got time to run over and help him out. He was willing to take advice by that time, so I cut down his carburetor adjustment till the engine would pop back once in a while; saw that he had his spark advanced, and went a few rounds. It was better, but she still ran too hot. I stopped the engine and went over the motor carefully, and finally found the trouble—a loose fan belt. The fan had been drawing hardly any air through the radiator. After fixing that, he had no more heating trouble.

OUR second tractor overheated once, and a search failed to show the trouble. Accidentally I put my hand on the set-screw that held the magneto coupling to the driving-shaft, and it was loose. The spark had slipped back, making the motor run on a retarded spark. I did not know how to time a spark then, so had a garage man come out and time it for me. I saw how he did it and now can do it myself.

The pump shaft on my neighbor's motor broke off inside the pump. He started to crank it one cold morning. He had left some water in the pump, which had frozen, and when the motor was turned over the shaft twisted off. It did not overheat in the early spring, but did later. After examining everything I finally came to the conclusion that the water-pipes were stopped up with something. I took off the radiator, tested it by running a hose stream through it, examined the suction pipes up to the pump, took the pump apart and found the trouble. Now my neighbor is very careful about draining his pump in cold weather.

The tractor we have now has never yet overheated, nor boiled water, even in hard summer plowing. It won't, either, because I watch these things and never let anything go too far.

Fruit profit means delivering the fruit speedily, without jarring or jolting after it has been carefully graded. The lumber-wagon route does not aid in securing that profit. An auto and trailer do.

J. H. Brown, who has a profitable fruit farm, purchased a light automobile for a moderate sum, and then secured a trailer. The first time they were used Mr. Brown hauled 2,500 pounds of hay, and several times has taken six bales of cotton to market at a load. However, it is for marketing peaches that he finds the auto and trailer most profitable.

On the light automobiles twelve crates of assorted and attractively packed peaches are carried, while the trailer ordinarily carries forty-eight crates. Last season 6,000 crates of peaches were taken to market with auto and trailer. Each crate weighs about fifty-two pounds.

It takes Mr. Brown a half hour to return to his orchard after unloading, as against an hour and a half with the team. Besides, with a team, there was always a jolty trip to market that meant mushy peaches.

"The greatest beauty of my trailer is the satisfaction of knowing my load is on," says Mr. Brown. "I don't have to look around to see if it is coming all right. All I have to do is just drive. Out of the hundreds of loads I have carried I never have had to stop to readjust a single crate to keep it from falling off."

IN the summer of 1914 the Albros had a lot of hauling to do on their farm, and as they did not have enough horses, they began to figure on buying a tractor. They didn't know what machine to purchase, neither were they sure that any tractor could do the work which they required of it. No tractors were in use on the neighboring farms, and being somewhat skeptical Mr. Albro went to a large farm twenty miles away to see a tractor at work. When he arrived at the place, the owner was breaking up a pasture. The tractor easily pulled three plows and did an excellent job. That man did alone as much work as four men with four three-horse teams could do. Mr. Albro saw that tractors were no longer an experiment, and right there decided to buy a machine.

The same week he purchased an 8-16 tractor, which can pull three fourteen-inch bottoms when plowing at a depth of from seven to nine inches. Most of the time they used only two plows, as they then had plenty of reserve power to use when needed. The tractor was found able to do many things they never expected it could. They have used it for disk-harrowing, for hauling grain, sand and hay, and for pulling rocks. If the rocks are not too large, and are first dug around carefully, the tractor pulls them up with a chain.

The summer the Albros bought the tractor, the weather was so hot during the greater part of the harvest that their horses were almost unable to do any work at all. They put them in the pasture, hitched the tractor to the binder and had a boy to run the binder. They kept going all the time, stopping only when it was necessary to oil. They cut all the grain that season without using the horses more than a day or two.

Usually it cost them less to work with the tractor than with horses, and the tractor would do a piece of work much faster. With their tractor and two plows they could plow ten acres in about twenty hours. Last year they plowed 190 acres in thirty-eight days, working ten hours a day. Afterward they disked the land, using the tractor.

You need not be an expert to run a tractor, but, of course, the more you know about it the better. When the Albros bought their machine they had no experience, except what they had gained in running a stationary gasoline engine on the farm. Still, they managed the tractor all right. Several neighbors predicted that they would soon get into trouble, and that the tractor would not last long, but they have the same tractor to-day, and have nothing against it except that it does not develop quite enough power. When you buy a tractor, get one that will burn kerosene, and one that will develop a little more horsepower than you will actually need in any kind of work. Also buy your machine from a well-established company, so that you can be sure of obtaining repairs.

THE prospective buyer of a motor truck should carefully analyze his hauling needs and get all the qualities and requirements a truck must possess to measure up to his demands. Making the wrong selection in buying a truck or tractor means a serious waste of time and money. First, analyze the hauling problem by considering the following things—their importance ranking in the order named: Size of average load, power, governing speed, size of body, wheel base.

The person hauling small loads has a different problem from the one who hauls heavy loads. The former may select a truck of the capacity he desires, while the latter must select a machine capable of carrying a maximum load in order to avoid the evils of overloading. The man who has a haul over a prescribed distance each day which necessitates employing one particular truck for the work, should be cautioned to select a truck which will haul his heaviest load in order that he may not overload or cause a second trip.

The power of the truck selected should be determined only after careful consideration of the weights to be carried; and the character of the service and the percentage of grade in the zone traveled by the truck. Hill country demands a different gear ratio than that used on machines that run over level ground; the engine of a hill-climbing truck should have a long lever with which to work.

Where speed is an essential item, light trucks are advisable when frequent stops are made. Where fixed loads over a given route are to be hauled, a truck of medium speed and large hauling capacity is a wise selection. For the owner having heavy haulage in congested districts speed is sacrificed for heavy carrying power.

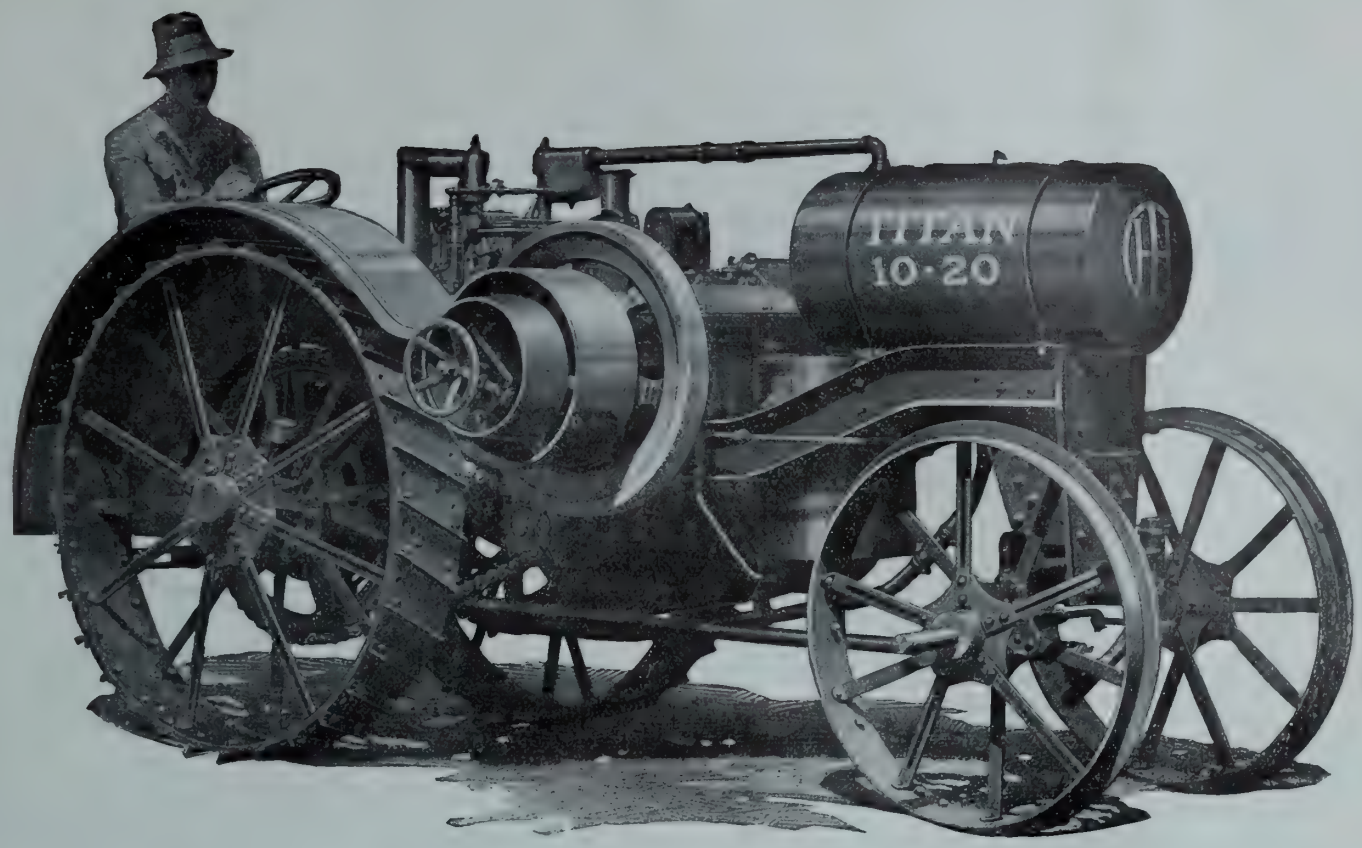
Bulky loads do not necessarily call for heavy, powerful trucks; likewise weighty, compact material does not demand a light truck. Such selections are often made by owners through misjudgment. Weight is the deciding point, and buyers should exercise care in selecting a body fitted to the truck and to the load it is to carry.

The character of the haulage should, in a large measure, determine the length of the wheel bases. Clearance—the distance between the lowest portion of the truck and the road—is dependent on the character of the road surface and the amount of ruts and holes in the roads and pavements to be encountered.

Good Dealers Are Home Town Boosters

Two Veteran Ontario Dealers

In this photograph, taken recently, is shown a live wire machine man of Watford, Ontario, R. E. Johnston. Mr. Johnston started in the machine business thirty-five years ago and has disposed of goods from Georgian Bay to Lake Erie. He has represented the I. H. C. in Watford for thirteen years continuously, and through his careful handling the business has made rapid strides. Fifteen Deering fertilizer drills and a bunch of spreaders have already been disposed of this season. Apart from this work Mr. Johnston has held municipal offices in Watford for nineteen years, always taking an active part in promoting the welfare of this industrious Western Ontario town. He is reeve (similar to county agent in the States) of his township at the present time. If you should want to buy a tractor, ask E. C. Hanson (below), Bothwell, Ontario, about his line. His arguments are unsurpassed for convincing the public, and, moreover, he stands back of every statement. Seven tractors were disposed of last season and more than double that number this year. This picture was taken at Bothwell Corn Show, where Dealer Hanson (extreme left), and Miller (second from left), tractor school lecturer, and Blockman Kilbride (by the water tank) were demonstrating tractors. Mr. Hanson takes a most active part in the welfare of his home town, and incidentally in cream separators. His allotment for 1919 was seventy-five.



Now For Another Year of Farm Power Advance

DURING the twelve-month period now drawing to a close, general Canadian farming has been much influenced and moulded by the latest developments in tractor power. Peace came forth a year ago out of fifty months of war and the builders of tractor power were permitted to turn their skill and abilities again to constructive effort.

In the onward march of farming efficiency, the International Harvester tractors have been vigorous leaders. While they have been plugging away on thousands of farms, they have been the topic of conversation on the tongues of agents, farmers, and men of the tractor industry in every section of the country.

In the middle of 1919 came announcements of notable price reductions on all Harvester tractors —reductions made possible by great quantity production and sales. **Titan 10-20 and International 15-30 Kerosene Tractors**—world-famous and long popular—rose still higher in demand. At this writing the International factories, turning out a complete tractor every few minutes, are unable to cope with this demand.

These are tractors—proved successful in design, practical and durable in construction, economical in operation, thoroughly tried in every capacity—which this Company has ready at the 1920 starting line for new power conquests. They are facing a prosperous year; facing prosperous territories calling for more and still more farming power.

Agents who will go across that starting line in charge of **Titan 10-20** and **International 15-30** must make ready **now.** For safeguarding their own and their customers' power requirements for next spring, early arrangements are necessary. Good tractor supply for next season is a very uncertain matter. Get into communication with the branch house.

INTERNATIONAL HARVESTER COMPANY
OF CANADA LTD.

WESTERN BRANCHES — BRANDON, WINNIPEG, MAN., CALGARY, EDMONTON, LETHBRIDGE, ALTA., ESTEVAN, N. BATTLEFORD, REGINA, SASKATOON, YORKTON, SASK.

EASTERN BRANCHES — HAMILTON, LONDON, OTTAWA, ONT., MONTREAL, QUEBEC, QUE., ST JOHN, N. B.

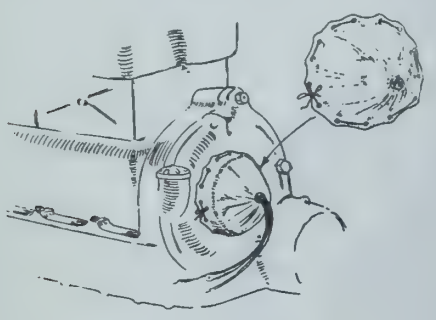
SHOP NOTES FOR THE GARAGE MAN

Helping Ford Ignition—Making Valve Lighters—Windau Tool Holder

Conducted by SCOTT T. DUTHIE

HELPING FORD IGNITION

EVERY man who has driven a Ford has undoubtedly experienced trouble with ignition during a heavy rain and has tried to overcome the difficulty in some manner. One of the difficulties is in preventing water from running down from the cowl, finding its way under the back edge of the bonnet and trickling down to the high tension binding posts on the front of the dash or the high tension wires connected thereto.



Emergency Cover for Ford Timer.

To overcome this, it is a simple matter to install a little trough to carry off the water, just as a trough carries off the rain water from a roof. This is shown herewith, and consists of a piece of galvanized iron or tin, formed as shown at A. The piece may be made long enough to a little more than cover the high tension wire terminals and of material about 2 in. wide, bent on one edge to form a trough. Then it is attached to the front side of the dash, above the high tension terminals, the radiator support rod to form one of the holding mediums. It should be slightly slanted so the water will run away easily. The manner of installing is best shown at B in the same figure.

The edge which lies against the front side of the dash should be straight and a sufficient number of screws should be used to hold it close against the dash, so no water can seep between the trough and the dash.

One great source of trouble with the Ford ignition when driving in a rain is that the water pours through the radiator and shorts the commutator, located on the extreme front end of the crankcase, being directly attached to the camshaft.

By making a simple case of light leather, with draw strings, similar to an old-fashioned tobacco pouch, this difficulty can be overcome. The case may be made from an old top fabric, a piece of oilcloth or any similar waterproof material. It should be cut to form a cone and then stitched. Around the edge punch a number of holes, about 1 in. apart, through which draw a shoe lace or a piece of strong twine.

The casing can be put over the commutator, inclosing at the same time the terminals and wire, but not drawing the string so tightly as to hamper the movement of the commutator.

The seam of the casing should be placed on the under side and it would also be a good plan to have at least one hole in the bottom to drain out any water that might possibly find its way inside. 95 per cent. of the water that might strike the commutator will be diverted by the casing and eliminate another source of ignition trouble.

WINDAU TOOL HOLDER

THE Windau Tool Company is making a lathe Tool-holder for work having two to four operations. It holds four different tools which are instantly ready for use by being turned into position. The makers say, after being set up no time is wasted by resetting. There is a screw adjustment, with a ¼-inch adjustment, to allow for wear on cutting point of tools. The shank is made from drop forging, and the turret made from cold rolled steel. It is manufactured by the Windau Tool Company, Cleveland, Ohio.

MAKING RUBBER BATTERY TOPS

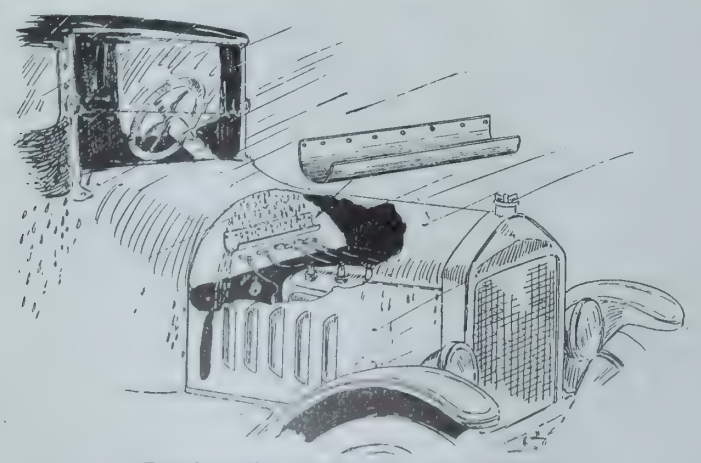
IN an emergency, rubber tops for batteries can be made from old cracked battery jars by securing a piece of flat iron or steel ⅛ in. thick and the size and length and width that you want for different size batteries. Holes are bored in the plates the proper size and distance for vent holes and posts and the edges are ground off to a bevel. A piece of rubber from an old jar is clamped between two of these plates and the whole outfit steamed until the rubber is soft. The holes are then punched or cut with a sharp knife, the steel plates forming a template.

FUEL PIPE OBSTRUCTION

WHEN foreign matter of some kind finds its way into the fuel pipe between the two sections of the vacuum system the result is that the vacuum tank is empty in spite of the fact that there is plenty of fuel in the main tank.

When this happens fill the float chamber of the carburetor with gasoline, which can be drawn from the main tank, and then start the engine.

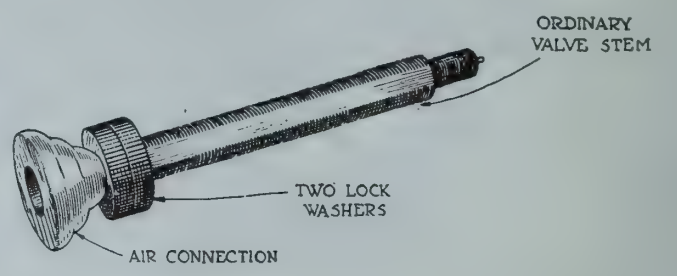
The resulting suction will draw out the obstruction and permit the system to function again. This same trouble is sometimes caused by obstruction of the small air hole in the filler cap of the main fuel tank, which must be kept open to induce atmospheric pressure on the gasoline.



Trough to Keep Water From Ford Ignition.

TESTING TUBES WITHOUT VALVES

TUBES which have been vulcanized can be tested without replacing the valve, by the use of a device shown in the illustration. This device consists of an ordinary valve stem, the bottom of which is sawed off, leaving the stem about 2½ in. long. Two lock washers are then screwed together on the lower end of the valve stem and this gives a base to weld an ordinary air connection. After the air connection has been welded on, it will be air-tight and ready for use. The small end of the tube tester is inserted in the air hose at the large end over the valve in the tube. Air pressure is then applied to the tube in the usual way and when enough air is injected the hose is pulled from the small end of the tube tester, with the tube tester still on the tube.



SOCKET WRENCH

IT is possible to make a socket wrench by placing a bolt head of the proper size in one end of a pipe and then forging the pipe to fit it.

After the wrench has been made it can be annealed, if desired, to give it lasting qualities.

A hole is, of course, bored in the opposite end to take a cross-piece and complete the tool.

CLUTCH AILMENT

IF the sliding member of the clutch is rusty, it will give the effect of a grabbing member. The rusted portion will prevent the clutch's engaging, gradually holding for a fraction of a second and thus forming a quick engagement. The operator often believes that the trouble is due to poor facing or worn engaging members.

PORTABLE LIGHT CORD PROTECTOR

THAT section of a portable light cord near the handle generally receives considerable abuse. It is walked upon by employees, damaged by tools dropped upon it and frayed from hanging over brackets and bars.

It is an easy matter for one to protect the cord, especially that part near the light, by slipping a length of old rubber hose over the cord. The hose should be taped to the light fitting and also to the wire at the other end so as to make watertight joints.

RADIATOR LEAKS

RADIATOR leaks are often very hard to locate, especially when they are little ones. In these circumstances empty the radiator completely and blow smoke into it through a jeweler's blowpipe. This will discover the location of the leak. A little soft solder on the end of a wire will enable you to reach places where common soldering cannot be carried out.

KLEMME HOIST AND CRANE

With the Klemme hoist an engine can be overhauled without being taken out of the frame of the car, main and connecting rods can be adjusted and other work underneath the car performed. It allows the workman to get at the job in a comfortable position and the job to be properly lighted up. Rear axle work can be performed, or the front wheels raised to adjust the steering gear, etc. The hoist is tested to 13,000 lbs. and thus will take any make or weight of car. It is provided with a safety locking device so a car can be locked at any desired height. There is also a crane attachment, by which an engine or any other part can be taken from a car and carried to any part of the shop, as the hoist is portable. The crane has a lifting capacity of 3,000 lbs. No chain hoist is included in the price. The lifting height of the hoist for the average car is from 48 to 53 in. The price of the outfit is $175 f.o.b. Davenport. It is made by the A. C. Klemme Mfg. Co., Davenport, Iowa.

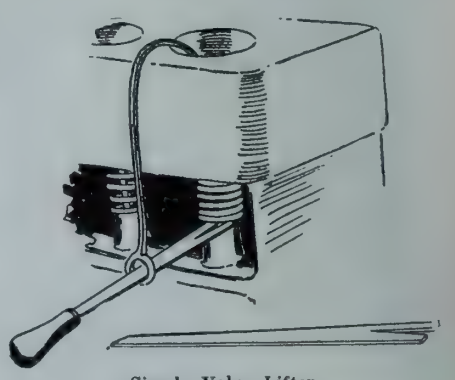
CLUTCH PEDAL RELEASE

THE clutch pedal can be held down so that the clutch is released by using a wooden stick with a number of notches cut in one end. The end without the notches is placed on the clutch pedal, which is then pushed down and one of the notches in the other end engages the front support of the driver's seat, the cushion of which has been removed. The same stick can also be used in adjusting the brake.

MAKING VALVE LIFTERS

GARAGES, service stations and repair shops can be kept fairly busy even in the dead of winter, when driving is at a low ebb, by making tools that have been found badly needed during the course of the summer's work.

Here is shown a simple and inexpensive way to make a valve lifter, and with half a dozen sizes almost any cylinder can be accommodated.



Simple Valve Lifter.

A piece of ¼ or 5-16 in. rod bent in the shape shown in the figure, and made of a length to suit a cylinder, is about all there is to it. But a little improvement can be added by making the lifter proper.

A Cockshutt—Frost & Wood Contract will bring *you* Bigger Business.

Many signs point to a prosperous 1920 season for the Implement Dealer who has the line of goods that will meet all the demands of his community.

There is unquestioned value and goodwill in a business when you build up a trade featuring a particular line of goods. Sell a farmer a Gang Plow which in service lives up to your arguments for its sale, and that same man will be open to easy conviction that your Harrow, your Seeder and your Binder are of equal value to him. It means least time and effort per sale—hence lowest selling cost and biggest net profits.

This is the time to get a line on the Cockshutt-Frost & Wood Agency—and concentrate your efforts on implements that will build up a permanent and profitable business for you.

The Cockshutt-Frost & Wood line includes implements for every farm—and for every season. It means sales from January to December—no off seasons.

Write our nearest office to-day for our Special Dealers' Proposition.

We will gladly give you full information on this line of Big Business Getters.

Cockshutt Plow Co., Ltd.

Brantford Winnipeg Regina
Calgary Saskatoon Edmonton

The Frost & Wood Co., Ltd.

Smith's Falls, Ontario
Montreal, Que. St. John, N. B.

Binders, Reapers, Mowers, Rakes, Hayloaders, Plows, Harrows, Cultivators, Pulverizers, Rollers, Grain Drills, Seeders, Corn Planters, Potato Diggers, Manure Spreaders, Feed Cutters, Grinders, Gasoline Engines, Wagons, Sleighs, Carriages, Cutters, etc.

Fiat Tractor

Weight 5730 lbs.

Drawbar Pull in First Speed
5520 lbs.---18/25 H.P.

THE FIAT, after its powerful contribution to the Victory of the Allies by the supply of large number of motor cars, lorries, aviation engines and machine guns, is now devoting its activity to the construction of peace products.

In its new program the FIAT offers most elegant and perfect motor cars, motor trucks and *powerful and well finished agricultural tractors,* thus confirming once more the fame of its make, known for 20 years all over the world.

Agents to be appointed all over the Dominion

ADDRESS ALL ENQUIRIES TO

Elmo De Paoli
Westminster Hotel
TORONTO

OR

Italo-Canadian Motors Company
720 St. Paul Street West
MONTREAL

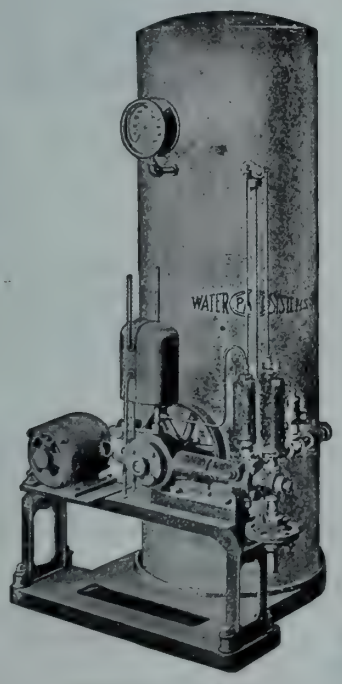
Northern Electric

POWER and LIGHT

The complete line of Electric Farm Plants and Accessories.

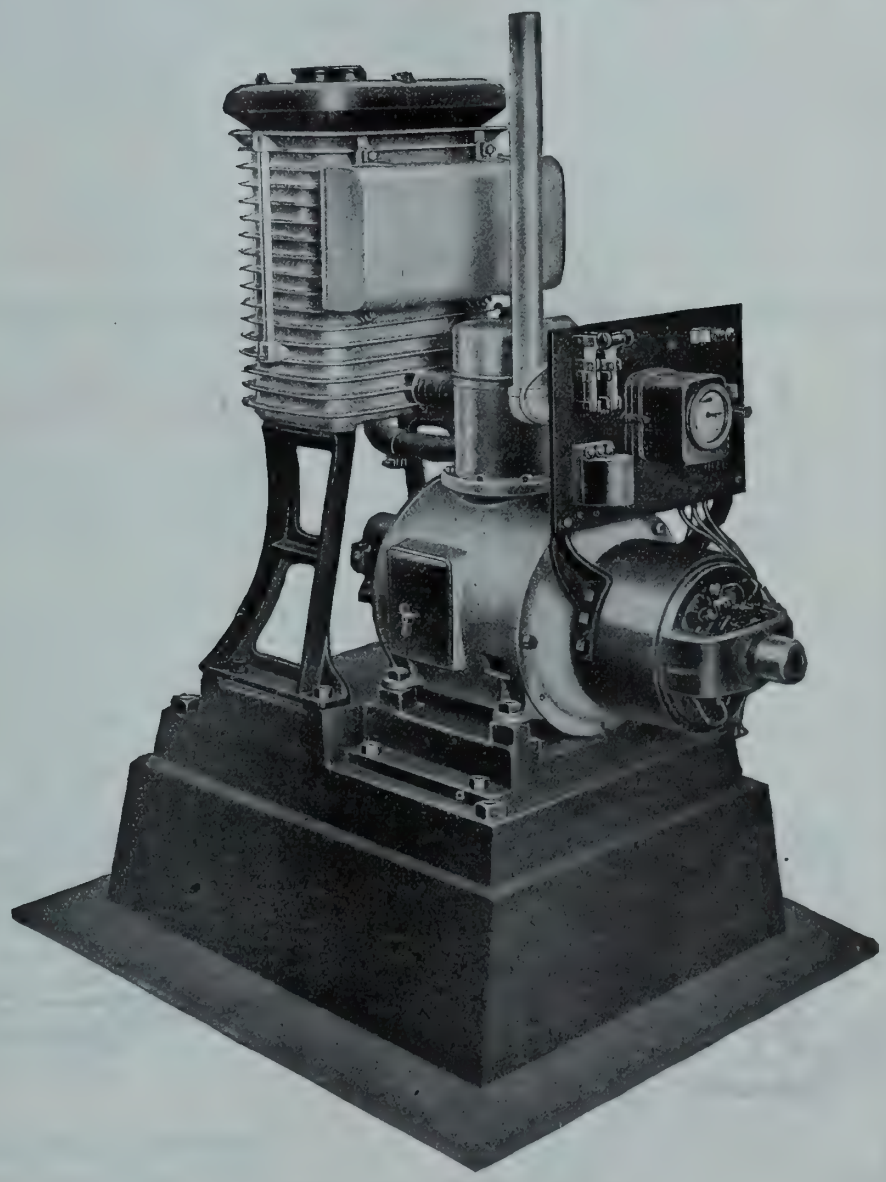
PLANTS---WATER SYSTEMS---MOTORS
HOUSEHOLD DEVICES---WIRES
AND SUPPLIES

Northern Electric Power and Light Plants are backed by one of the largest electrical manufacturers and distributors in Canada. For more than twenty years we have specialized in electrical supplies FOR THE FARM.



Tank and Motor

Hundreds of farmers are now buying water systems. Are you selling them? At your service, the most complete line---any size. Automatic ---Air-pressure---open tank or hand controlled.



¾ KW—Utility Plant—32 Volt

The greatest value ever offered the Canadian Farm

DEALERS:

The Electric Farm Plant field is practically untouched. Your prospects are numbered by the thousands. You can get into this profitable business by writing our nearest house to-day.

Northern Electric Company

LIMITED

Montreal
Halifax
Ottawa

Toronto
London
Winnipeg
Vancouver

Regina
Calgary
Edmonton

The Year-Around Tracto

HAPPY FARMER dealers need not have prospects that say to them, "Oh, I may buy one next Spring." Happy Farmer dealers can sell that prospect right now. Why?

When the vital moment for starting plowing comes, he might not be able to get delivery of his tractor. Then, too, he would have to start in WITHOUT EXPERIENCE. For belt-work alone during this winter, it certainly would pay him to get his Happy Farmer Tractor NOW.

When Mr. Prospect can see for himself that the Happy Farmer Tractor is to him a paying proposition the year around —won't it pay you to **sell** it to him the year around? Think of both fall and winter uses of this light tractor for belt work and hauling. (See list at side of this announcement.)

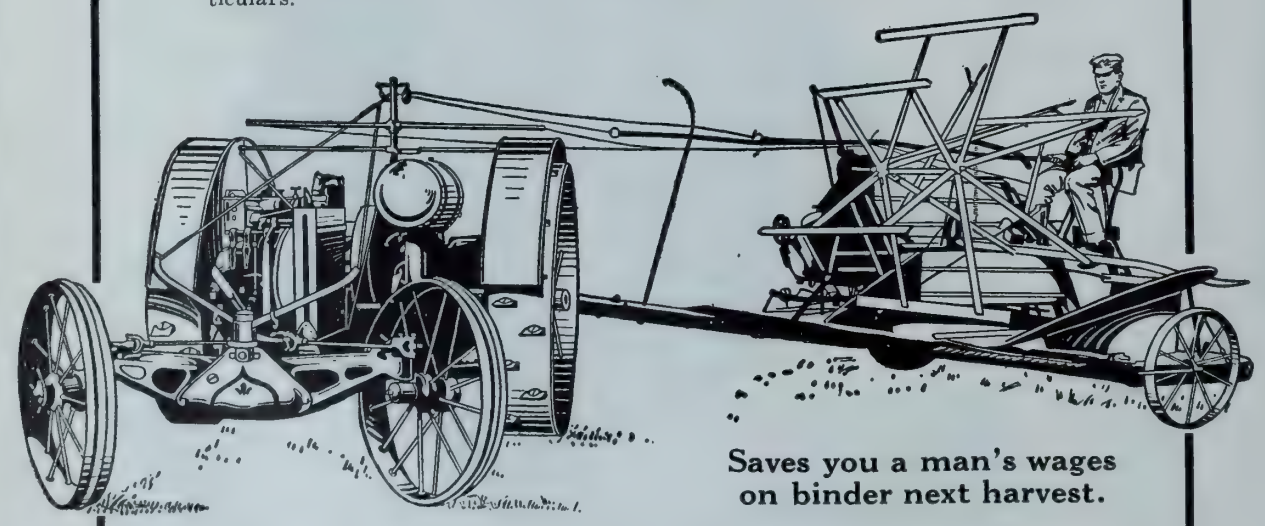
So simple is the Happy Farmer Tractor that a boy can run it—but he can do better work if he has experience. So it pays to get the tractor now and get acquainted with it before plowing time.

The big, cumbersome type of tractor will do belt work, of course. So will Niagara Falls! But you don't want the great power of a Niagara to run the churn, do you? No. When you use Niagara power to run a churn you have that power "stepped down" to just the amount you can use without waste.

Line Drive Saves Man's Wages

In the picture we show one man handling both binder and Happy Farmer Tractor. During the fall the up-to-date farmer uses the tractor with line-drive to haul the manure spreader, wagon, etc.

You can drive the Happy Farmer Tractor with lines like you do horses. With the simple line drive attachment one man can ride on binder and control both binder and tractor. Saves wages of extra man on binder, hay-loader, manure-spreader, etc. You can easily attach it yourself. Write for particulars.



Saves you a man's wages on binder next harvest.

Happy TRA

With the Happy Farmer Tractor you hav power galore for the big jobs, but you ca "step down" the power for the little one You use exactly the amount required. other words, there is no waste of fuel in th small jobs.

And the lightweight Happy Farm Tractor is as handy as a team of horses f getting about from one job to another—f handier in fact, for it is always ready for bus

Dealers! Plar Write fo

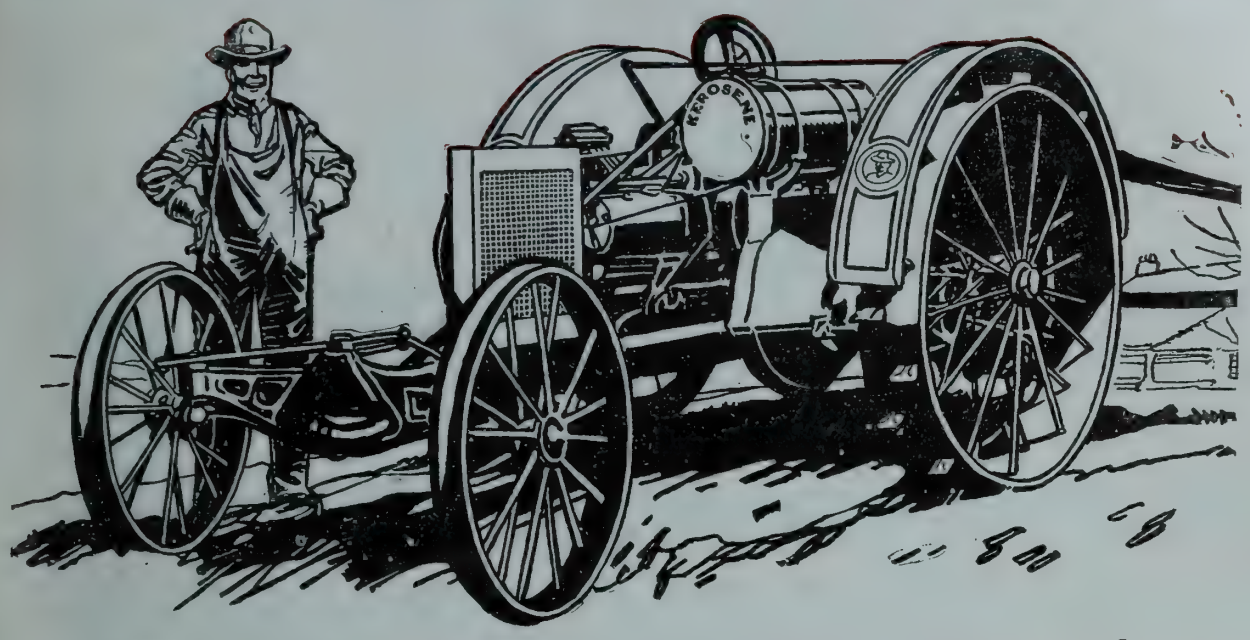
This "year-around" Farmer meets with eco announcement. Surely opportunity. Write us

The Renfrew Machinery Company, Lir

Agencies almost everywhere in Canada *Eastern*

Other Lines: Renfrew Cream Separator. Re

for Year-Around Sales



Happy Farmer Tractor is always ready for all belt work.

Farmer TOR

ness. Not so with cumbersome, heavy tractors with engines that may use up far more fuel than small engine jobs are worth, not to mention the extra power to move them around.

The fact is that no other tractor is so splendidly adapted for paying its keep over the winter on belt work, hay-baling, etc. Happy Farmer is the "Year-around Tractor."

Show your prospect right now this list of "'tween-season uses" and you can sell him NOW instead of next spring.

Show him how he ties up less money in the Happy Farmer Tractor in regard to both first cost and repairs—how Happy Farmer Tractor delivers power at lowest cost.

On heavy work Happy Farmer Tractor has, over and over again, beaten all competitors in plowing contests. With only 3,700 pounds weight it gets no less than 2,000 pounds of drawbar pull, for a good engineering reason. It handles with ease three 14-inch bottoms at 8 inches depth—and it does it on cheap kerosene.

Year-around USES of the Happy Farmer Tractor

Winter:
- Sawing wood
- Grain elevating
- Pumping water
- Baling hay
- Circular saw
- Grain grinder
- Churn
- Cream separator
- Feed cutter
- Snow plowing
- Lathe and all kinds of shop machines.
- Hauling,

etc., etc.

Spring and Summer:
- Plowing
- Potato planting
- Disking
- Harrowing
- Fertilizing
- Seeding
- Rolling
- Cutting straw
- Pulling the binder
- Hay-loading
- Operating hay fork

etc., etc.

Fall:
- Plowing
- Potato digging
- Filling silo
- Threshing
- Road grading
- Stone crushing
- Spreading manure
- Loading lumber
- Fertilizing
- Clearing land
- Uprooting trees
- Pulling stumps
- Removing stones
- Grubbing

etc., etc.

Does any work that can be done with horses or gasoline engine at less cost of time, labor and money.

or BIG Winter and Spring Business Literature and Terms NOW.

or is naturally the big seller! Look at the list of uses which the Happy . Our literature explains and proves in detail every statement in this ee-cent stamp is not much to pay for looking at so inviting a business ce—remaining territory is going rapidly.

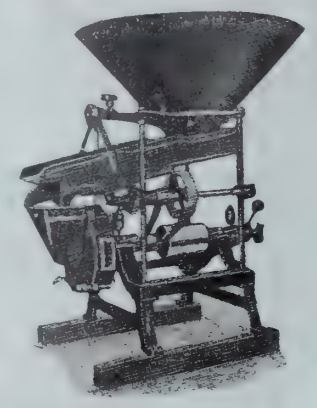
ted, Head Office and Works, **Renfrew, Ontario, Can.**

nch, Sussex, N.B. *Quebec Branch, Montreal, P.Q.*

ew Handy 2,000 Pound Truck Scale for the Farm

The Winner of highest awards

wherever exhibited



"VESSOT" Feed Grinders

---an easy line to sell

A "Vessot" will lower the farmers' grinding cost because its grinding plates are without equal in grinding efficiency and durability.

A "Vessot" Agency will pay you a good commission.

May we mail you our proposition? If so, write us without delay.

INVENTORS AND MANUFACTURERS

S. Vessot & Co., Joliette, Quebec

Sold exclusively in Canada by
International Harvester Co. of Canada, Limited.
Branches: Calgary, Edmonton, Lethbridge, North Battleford, Regina, Saskatoon, Yorkton, Brandon, Winnipeg, London, Hamilton, Ottawa, Montreal, Quebec, St. John.

Mr. Dealer!

IF

Price
Quality of Material
Workmanship
Close Skimming
and
Easy Turning

are considered by your customers in buying a Cream Separator, then we claim that the

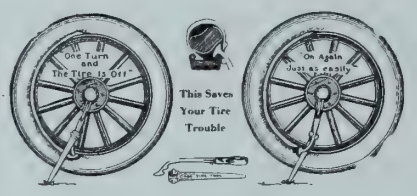
Sanitary King

is the best buy in Canada to-day. Write for prices and terms.

--

King Separator Works of Canada

Limited
Bridgeburg or Whitby, Ont.



DEALERS

The Case Tire Tool is
The Fastest Selling Auto Necessity

Liberal Profits. Quick Returns.

Order from 2 to 5 dozen to-day from
YOUR JOBBER
and write us for circulars and display advertising matter

Free Demonstrating Stand to all dealers ordering ten dozen or more at one time.

Seven jobbers in Winnipeg and several in Toronto, etc., handle the new and wonderful

CASE TIRE TOOL

Motor Necessities Co. of Canada
231 Somerset Building, Winnipeg, Man.

SAYS THE MASTER MECHANIC: The Greb Automatic Grip Puller is a One-Man Puller — Quick-acting, strong and simple in the extreme. May be locked in any desired position. A combination of two or three arms. Heavy Duty Size capacity 1" to 18"—Junior Size capacity 1" to 7". Two sets of jaws furnished with each size.

TEN DAYS' TRIAL. — If your dealer or jobber does not have them we will send you one. Try it ten days. If not satisfactory return to us and we will refund your money. We also make the GREB RIM TOOL.

THE GREB COMPANY, 319 State St., BOSTON

Dairy *and* Household Supplies

HINTS TO DEALERS

EVERY up-to-date dairyman takes pride in the appearance of the place where his cows are housed and milked. It should be kept clean, well lighted, and equipped with the most modern utensils. Now that the dairy business is booming, and experts are writing in every farm and dairy journal on the importance of milk as a food, and giving hints as to improving the quality, and increasing the output, it is up to the dealer to seize the moment as the most propitious for selling. He should point out, that up-to-date equipment is a good investment; it is durable; decreases the cost of labor, and ensures the doing of a good job.

Mechanical milkers and cream separators are as great a necesisty in the modern dairy as the tractor is on the farm. The dealer should sell milkers and separators right through the winter and all the year. As we said before; the dairy business is booming, and the modern dairyman has forgotten the old time habit of slackening off in this industry when the snow comes; therefore, *sell in the winter and all the year round.*

CULTIVATE KINDNESS AND CLEANLINESS

AN interesting blotter was distributed among dairymen at the Utah State Fair recently, containing some pointed maxims on the principles of kindness and cleanliness. The maxims were prepared by Ben Eldredge, dairy agent for the Utah Agricultural College. Here are some of them:

"While criticizing your neighbors don't become too much reconciled to your own dirt."

"Our domestic animals have acute hearing. Why yell?"

"Gentle treatment of our cows, horses, hogs, and sheep will put money into our pockets and peace into our hearts."

"Dairymen! Safety first! Cleanliness is safety."

"Show me a man who says, 'Milking is a dirty job,' and I will show you a man who will make a dirty job of milking."

GET MORE OUT OF YOUR HOME

BY making the house and its surroundings healthful, convenient, comfortable, and attractive.

By securing a sanitary water supply; by using running water wherever possible—a simple piped system for water may cost only a few dollars.

By providing for proper disposal of sewage.

By thorough screening against flies and mosquitoes.

By adequate ventilating, lighting, and heating and well-arranged storage places.

By equipping the kitchen and other workrooms as conveniently as the farm buildings—get the man to study this problem with the woman.

By machine equipment—pump; power washer and wringer; milk separator; churn; car, but don't buy a $3,000 car and carry water because "we can't afford a water system."—"Hoard's Dairyman."

SAFETY SWITCH

THE C. H. Seventy Fifty Switch, manufactured by the Benjamin Electric Manufacturing Co. of Canada, Limited, Toronto, prevents all danger of fire due to leaving current "on" accidentally, the manufacturers state. The buttons tell clearly whether the current is "on" or "off." Pressure on the light button allows the current to flow, but the instant the black button is depressed the current is "off." With electric irons the switch is not only a convenience, but relieves the socket from the wear of making and breaking the current, and thus saves it from

burning out. Used with many appliances, the switch saves reaching up to an overhead fixture or going to a wall switch, as it may be placed close at hand.

HUBER BOOKLET

The Huber Manufacturing Co., Marion, Ohio, has published an attractive and interesting booklet entitled, "The Tractor in the Making." It tells the story of the Huber tractor from the first one put on the market in 1898 to the latest model, known as "The Huber Light Four Tractor."

NEW CASE DIRECTOR

Colonel W. B. Brinton, for years president of the Grand Detour Plow Company, has been elected a director of the J. I. Case Threshing Machine Company of Racine, Wis. He will look after the interests of the Grand Detour Plow Company, which is operated in Dixon, Ill., as a branch of the S. I. Case Company.

JOINS BELANGER & CO.

E. A. Messenie, formerly with the Moline Plow Company, at Montreal and Ottawa, has been appointed sales manager of Belanger & Co., of Montmagny, Quebec, manufacturers of stoves and plows. He is a brother of W. P. Messenie, sales manager for R. A. Lister & Co., of Canada.

NEW B. AND D. PLANT

The Black and Decker Mfg. Co. have commenced operations on their new plant at Towson Heights, Baltimore, Md. The new building will be 100 ft. deep x 200 ft. wide, erected on the west side of the present plant and will increase the total floor space to 32,000 sq. ft.

TAKES FIRE TO FIREMEN

Manchester, N.H.—An automobile belonging to Lucien Rousseau caught fire.

The owner jammed on the gasoline and hurried to the central fire station, where he informed the firemen he had brought a little blaze he would like to have extinguished.

A chemical tank put out the fire. Good head work!

BUYS OUT OIL CO.

THE Railway Asbestos and Packing Co., Limited, of Sherbrooke, P.Q., has sold out its plant and manufacturing rights to the Spedolene Manufacturing and Refining Co., Ltd., 27 Common street, Montreal. The new company will manufacture Spedolene lubricants under the original formula, for farm tractors, motors and trucks; also high-grade motor oils and tractor oils, as well as patented greases. The C.F.M. and other jobbers from coast to coast will handle the product.

Sharples dealers have the strongest possible selling argument for the Sharples Suction-feed Separator in saying: "It skims clean at any speed."

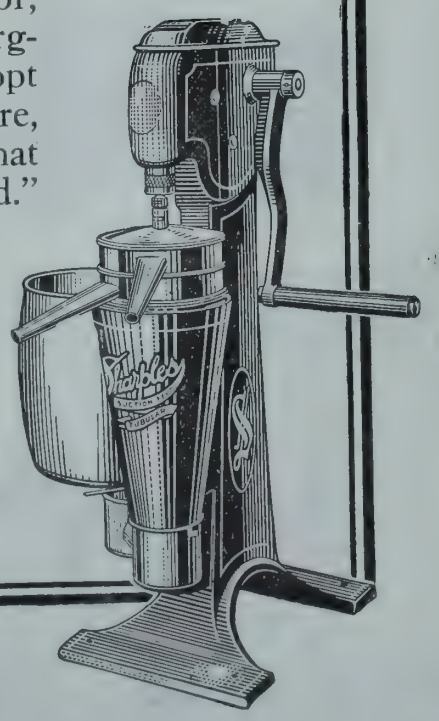
Dealers know that this claim has been proved time and again by official tests and by agricultural college officials. They can show prospective buyers the actual reports of these tests.

No other cream separator can skim clean at any speed. No other separator dealers dare to claim it. That is the reason for the *success of dealers who handle the*

SHARPLES SUCTION-FEED CREAM SEPARATOR

"skims clean at any speed"

Sharples dealers have the *only* suction-feed cream separator, made by the pioneer North American and the world's largest Separator manufacturer. No other separator can adopt the suction-feed principle. No other separator, therefore, has the big Sharples selling feature, the most important that any cream separator can have—"skims clean at any speed."



We will be glad to give any dealer information concerning his territory and the Sharples contract.

THE SHARPLES SEPARATOR CO.
TORONTO, ONT. REGINA, SASK.

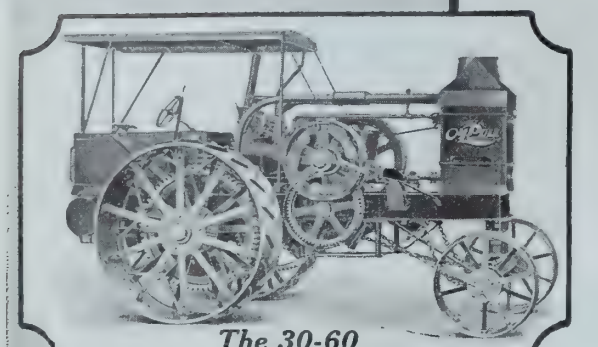
THE LOUNSBURY CO. Newcastle, N.B. J. CLARK & SON, Fredericton, N.B.
Distributors through all their branches

There are no substitutes for Dairy Foods

ADVANCE-RUMELY

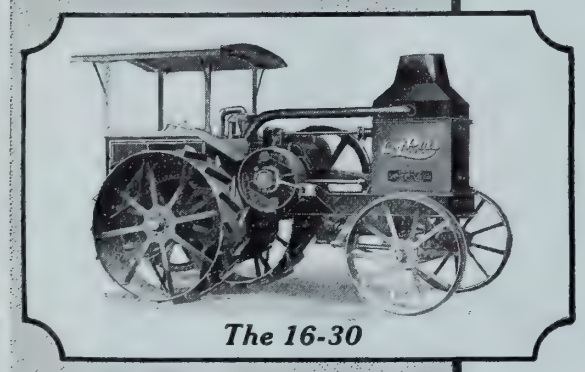
RUMELY OILPULL TRACTOR LA PORTE IND.

TRACTORS

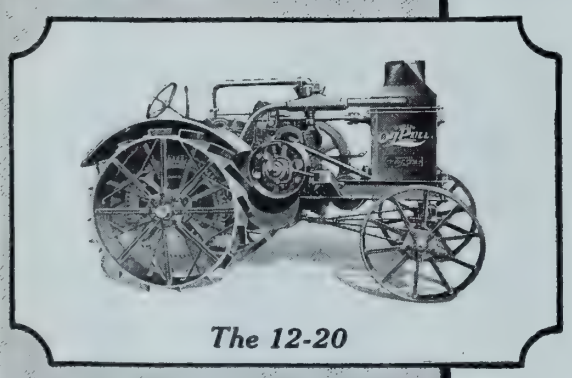


The 30-60

The 20-40



The 16-30



The 12-20

There is one big thing that farmers are asking for in a tractor today—dependable service at an economical cost.

Anyone at all acquainted with the tractor industry knows this.

There is one tractor above all others that has proved that it *can* give this kind of service—proved it over a number of years—proved it ever since the beginning of the tractor industry, and this tractor is the Rumely OilPull. Over 15,000 OilPulls are in use today.

You can sell OilPulls on performance—not promises. You can point to the OilPull record for proof that this tractor will give absolute dependable, economical service.

You can show that "Old Number One," Number Nine, Number Eleven, Number Fourteen and others have been giving dependable service for over ten years, and that they are still good for many more seasons of faithful day-in and day-out work.

There is no tractor built that can match these records of years of dependable continuous service, and OilPull economy is as remarkable as OilPull endurance. The OilPull is the only tractor that is guaranteed in writing to successfully use kerosene under all conditions, at all loads.

And all OilPull tractors are oil-cooled. The OilPull was designed to be cooled by oil instead of water to increase efficiency and decrease trouble. No freezing or boiling over in extreme temperatures. No scale deposits in cylinders or radiator, no rusting of internal parts, no clogging of the circulating system.

Advance-Rumely puts quality first and always will—it believes in and practices the policy—"The *life* of a tractor, not *price*, determines its *value.*" Remember, that in anything you buy "You get just what you pay for."

Among a few OilPull specifications of the 1920 models are:

Guaranteed kerosene burner
Two cylinder, low speed motor
Two forward speeds and reverse
Oil-cooled
Low platform—short turning
Patented shifting device for belt work
Hyatt Roller Bearings
Bosch Magneto
Madison-Kipp Lubricator

For 1920, there are four sizes of this famous tractor—from a 3-plow to a 10-plow size, rated as follows:—12-20, 16-30, 20-40 and 30-60 H. P.

This gives the dealer a complete line of tractors that will enable him to take advantage of every opportunity for a tractor sale in his territory. And remember, all OilPulls have a 25% reserve power over their advertised ratings.

Satisfied OilPull customers in every section of the country, of course, materially assist the OilPull dealer in making sales. An OilPull owner is an OilPull booster.

The 28 factory branches maintained by Advance-Rumely insure prompt and competent service in all sections. Each branch maintains a complete stock of machines, parts and an organization of trained experts.

ADVANCE-RUMELY THRESHER COMPANY, *Inc.*

La Porte, Indiana

Calgary, Alta. Regina, Sask.
Saskatoon, Sask. Winnipeg, Man.
48 Abell Street, Toronto, Ont.

LINE FOR 1920

Ideal SEPARATORS

Like the OilPull tractor, the Rumely Ideal separator holds a position of supremacy that is unquestioned. With more than 20,000 Ideals in the hands of owners, it has delivered a brand of performance that has made it famous for thorough, fast, clean work.

A new size—28 x 48—gives a lineup of five models for 1920, ranging from 22 x 36 up to 36 x 60. This offers a size for every possible demand—from the small outfits for individual use to the big outfits that will meet the needs of the largest custom thresherman.

The same individual characteristics that have made the larger sizes favorites with threshermen are found in the smaller sizes also.

In the Ideal the straw is kept constantly on the move *in a steady, even flow* from cylinder to stacker, due to the exclusive Ideal design. No possible chance for bunching, clogging, winding or choking.

It is this sound fundamental principle upon which the Ideal is built that is responsible for its now famous large capacity, complete separation and thorough cleaning. But like the OilPull the Ideal prefers to stand upon its field performance—and there's an Ideal owner in your neighborhood.

All the exclusive features that have made the Ideal the foremost separator are standard equipment in the 1920 models:

- Patented traveling slatted chain rake and the largest grate surface of any separator built
- Size for size, the longest straw rack of any separator built
- Lifting fingers on straw rack instead of common shakers
- Seven feet of extra chaffer length in grain pan, on larger models—smaller sizes in proportion
- One-piece frame construction
- All adjustments, oil and grease cups on the outside

The five sizes of Ideals for 1920 are—22 x 36, 28 x 44, 28 x 48, 32 x 52 and 36 x 60.

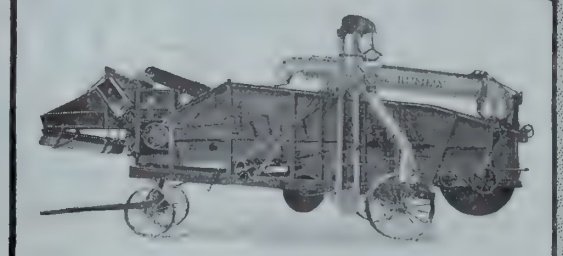
In most any section you will find a Rumely Ideal that is the oldest thresher in that district—running just as smoothly as it did at first, and cleaning the grain just as thoroughly. These old Ideals are the ablest assistants a dealer could ask for. Proved efficiency and lasting qualities are the best sales arguments there are.

An Advance-Rumely 1920 dealer contract is worth getting. We have a proposition that can't help but interest you—ask for it.

ADVANCE-RUMELY THRESHER COMPANY, *Inc.*

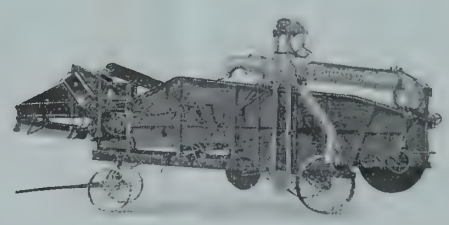
La Porte, Indiana

Calgary, Alta. Regina, Sask.
Saskatoon, Sask. Winnipeg, Man.
48 Abell Street, Toronto, Ont.



The 36 x 60

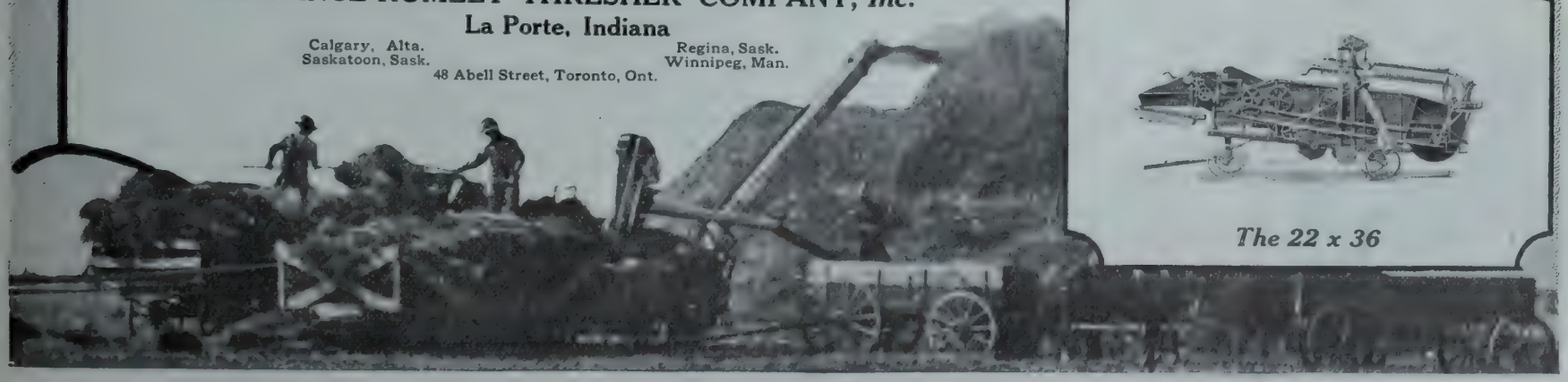
The 32 x 52

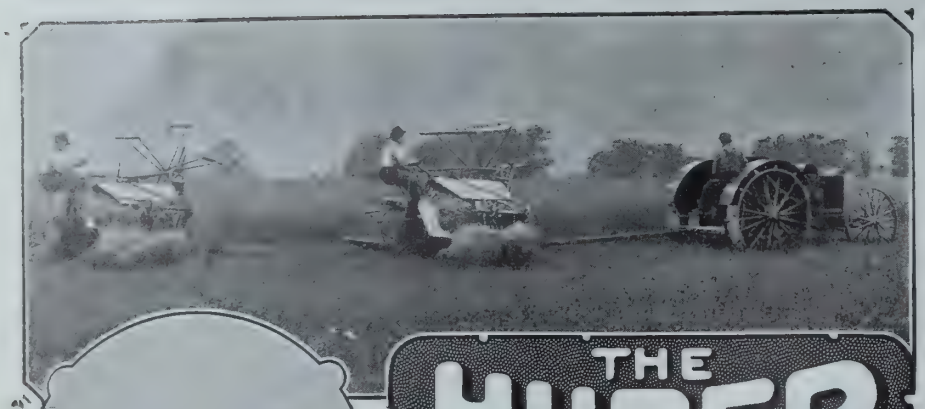


The 28 x 48

The 28 x 44

The 22 x 36



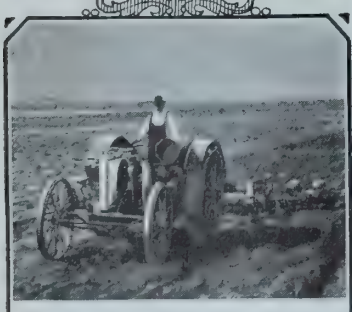


THE HUBER Light Four

Sell a Tractor that Has Made Good!

The Huber is so simple and easy to handle that 10-year old boys and women have plowed successfully with it and done the work of 4 men and 12 horses Anyone can learn to drive it in a few minutes It is simple to keep in repai .

The Huber does many kinds of belt work, harvesting wheat, cutting and loading hay, harrowing and hauling.



After plowing has been done the seed bed can be prepared with a Huber Light Four as it will work on ploughed ground without packing it down.

The Huber Light Four will operate a corn husker or corn shredder, a hay baler, ensilage cutter, wood saw or small thresher, and do many other kinds of belt work.

THERE are big advantages for any dealer who sells the Huber Light Four Tractor.

He sells a tractor with an international reputation — one that has made good for thousands of farmers and has the good-will of enthusiastic owners behind it.

He sells a tractor made by men who have twenty years of tractor building experience to bank on—who have built tractors of many types and sizes—and who **know** the tractor business.

He sells a tractor which has been made in the same model for several years so that all the uncertainties involved in a new design have been removed.

In the Huber Light Four he has the utmost simplicity in tractor design—direct drive to belt and all-spun-gear to drivers—minimum number of parts, perfect balance.

It is a tractor that is most economical of fuel and has over and over again shown its ability to get more work out of every gallon.

In short, the Huber Light Four minimizes the operating troubles of the owner and the service troubles of the dealer.

Depots in leading agricultural centres supply either complete tractors or parts promptly.

Strong advertising and merchandising policies back up the dealer's sales efforts—policies that have been successful in the farm implement field for 40 years.

When you sell the Huber you associate your business with a proven success. The pioneering work has been done. You begin **real business** at once.

The Barkley Tractor & Separator Co.
Edmonton, Alta.

The Huber Manufacturing Co.
Brandon, Man.

The Huber Jr. Thresher and the Huber Light Four are made by the Huber Manufacturing Company, Marion, Ohio, U.S.A.

NEWS — OF THE TRADE FOR THE TRADE

ONTARIO

ST. THOMAS.—Dodge Bros., it is expected, will shortly erect a plant here.

TORONTO.—The Sterns Tire and Tube Co. of Canada, Limited, has assigned.

BOWMANVILLE.—Two cars were badly damaged in a fire recently at Brown and Son's garage.

THORNBURY.—T. W. Lambert, harness-maker, has branched out into the auto accessory business.

WINDSOR.—Stephen Lesperance has opened up a new business known as the Windsor Car Exchange.

KEMPTVILLE.—William Dickenson, Chevrolet dealer, is building a large show-room and garage in Asa Street.

OAKWOOD.—A new garage will be built east of the Oakwood Theatre and will accommodate a large number of cars.

HAMILTON.—R. B. Creighton, of the International Harvester Company, has been promoted from salesman to blockman.

KINGSVILLE.—Dawson and Wigle, dealers in farm implements of all kinds, are handling the Waterloo Bay tractors.

ESSEX.—Jos. Wolfe, proprietor of the Ford Garage, has the agency for Ford cars and handles accessories and repairs.

LONDON.—S. G. Elliot, formerly salesman for the International Harvester Company here, has been made a blockman.

TORONTO.—The Garrett Motor Co., is enlarging its 50 by 100 feet garage at 2574 Yonge Street by the addition of a second storey.

LINDSAY.—The Cambridge Street Methodist Church has applied for permission to build a garage on the lot opposite the church.

OSHAWA.—The office staff of the McLaughlin Motor Company have organized on a large scale to take part in all lines of sport.

THORNBURY.—Grummett and Reekie, accessories. tires. oils, etc., find business so good that they are erecting a new garage, 40 by 60.

TORONTO.—Giles, Rice and Peters, Chevrolet dealers, have built a fine new garage in the Danforth district, at Danforth and Chisholm Streets.

CLAREMONT.—Thomas E. Stephenson has opened a new garage, and will handle all repairs and accessories. He holds the agency for Gray-Dort cars.

AMHERSTBURG. — The Carnahan Motor Sales has opened a fine new garage and salesroom. They handle Chevrolet cars and motor accessories.

WALKERVILLE.—Lane and Vicary have taken the agency for the Studebaker car. They also are doing a large amount of repairing and vulcanizing.

BRANTFORD.—The Ontario Motors Company has received a building permit to convert the old street railway offices on Colborne Street into a garage.

HAMILTON.—Hamilton hopes to get the Jenckes Spinning Co., of Pawtucket, R. I., and the Firestone Tire Co., of Akron, O., to locate in the immediate vicinity of the city.

STRATFORD.—The factory formerly occupied by the Mooney Biscuit Co. has been purchased by the Canadian General Electric Co., and will be equipped by them as a branch plant.

BRANTFORD.—The Fire and Light Committee of the City Council, have arranged to purchase for the east end department, a four-wheel-drive motor truck, to cost $10,000.

HAMILTON.—The Firestone Tire and Rubber Co. is locating in Hamilton and will commence work on the new plant at once. It is expected to employ from 3,000 to 4,000 hands.

BOWMANVILLE.—Luke, Boys and Cryderman are building a new garage, 44 feet wide and 60 feet long. It will have all the latest improvements. They handle all repairs and accessories.

TORONTO.—The A. D. Gorrie Co. has received a permit to erect a garage at 354-60 Victoria street. The garage will be of reinforced concrete and will cost $80,000.

CHATHAM. — A new garage has been opened by E. U. Taylor and Sons. They handle auto repairing, gasoline, oils, greases, etc. The father and sons are all returned soldiers.

LEAMINGTON.—H. N. Fox and Co. are dealers in automobile accessories, tires and electrical supplies. They are establishing a chain of stores throughout the province for handling accessories.

KITCHENER.—B. E. Snyder, formerly with Gerard Heintzman, Limited, will open up a taxi-service. He will provide a service over the whole day and night, and will be situated at 22 Otto street.

THOROLD.—At a recent meeting of the town council it was decided not to purchase a motor fire truck this year and that the present system of a team barned near the fire hall was ample protection.

CHATHAM.—R. J. Clements has equipped a new garage and will do all kinds of repair work. He has a well-fitted machine shop in connection and will give special attention to reboring of cylinders.

KINGSTON.—J. G. Shaw and W. H. Townsend have opened a garage and automobile agency at 35 Montreal street. They handle all accessories and have obtained the agency for Chevrolet cars and trucks.

CLINTON.—The firm of Stevenson and Nediger of the Clinton Motor Truck and Machine Co., has been dissolved. Mr. Nediger will continue the business, while Mr. Stevenson expects to go north for the winter.

KINGSTON.—George W. Boyd is building an extension to his garage. The new extension will be 66 feet by 76 feet, and two stories high, and when completed will bring his entire floor space to about 25,000 feet.

HAMILTON.—The Delta Garage, under the management of Adamson and Black, has been opened in King Street. A special feature is a large battery storing rack with a capacity for 200 batteries, stored throughout the winter.

TORONTO. — W. A. McLean, M.E.C.E., Deputy Minister of Highways for the Province, said at a luncheon given by the Electric Club recently, that there were 142,000 miles of highway in Ontario, a large proportion of this mileage was surfaced road.

LINDSAY.—Richard Sylvester, head of the Sylvester Mfg. Co., inventor of the famous Sylvester Plow and Cultivator, died recently, aged 74. Although he ceased the manufacture of agricultural implements many years ago, large numbers are still in use in Canada. Recently, he devoted his attention to the manufacture of gas engines.

A Prime Saves Time, Worry
Batteries, Starter and Gasoline

Champion

Priming Plugs

Champion Priming Plug Price $1.50

guarantee this time-saving because they put the gasoline into the heart of each cylinder at the sparking point and start the motor humming on the first turn-over.

They are the Plugs needed by every man who insists on getting the most comfort and service out of his motor in cold weather.

From now till next April you can drive your car or truck in the coldest weather, stop your engine when you stop your car and be certain of a quick start if each cylinder is equipped with a Champion Priming Plug.

If you sell automobile accessories your stock should include Champion Priming Plugs.

They enable you to give a service that keeps customers coming to you for all their requirements.

Look over your stock and order from your jobber at once.

Champion Spark Plug Co. of Canada, Limited
Windsor, Ontario

Automotive Accessories *and* Implement Equipment

TRACTOR TRANSMISSION

ANNOUNCEMENT is made by the Cotta Transmission Company, Rockford, Ill., of a tractor transmission in which gears are always in mesh, and in which it is possible to change speeds without shifting gears. In Cotta Transmissions the jaw clutches are shifted instead of the gears themselves.

The Cotta Tractor Transmission has two speeds forward, and one reverse, in which a power shaft is incorporated which may either be taken out of the right or the left hand side of the Transmission, the same being interchangeable in either position. The gear ratio as shown are:

Direct	1 to 1
High Speed	1 to 1.56
Reverse	1 to 1
Pulling Speed	1 to 1

The direct speed is the plowing speed, and the high speed a speed above direct for faster travelling when running light or doing light work.

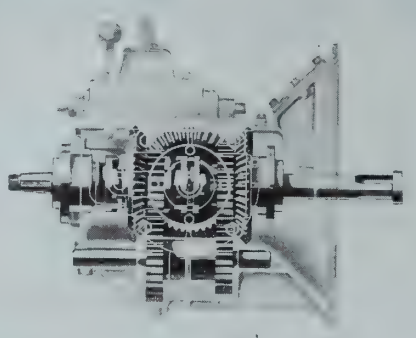
This constant mesh type of transmission is unique in design, and has many particular advantages. The number of gears is reduced to a minimum with only one revolving shaft. The mainshaft, including the stem gear, is mounted on double row ball bearings, countershaft is stationary within the case and the two countershaft gears, which are made from one large forging, are mounted on roller bearings which reduces the revolving weight to a minimum. Speed changes are made by the engagement of jaw clutches, the same as in all constant mesh Cotta type of transmissions. By the movement of the clutch to the front of the transmission. the direct speed is engaged. By moving the clutch to the rear the high speed is engaged, the reverse clutch being that in the rear, the case which engaged with the clutch on the side of the bevel gear, the reverse pinion being the power shaft bevel pinion, which at this time is used for the purpose only.

When the power take-off is in operation, the transmission lies in neutral, and the driving bevel gear which is integral with the drive end drives the bevel pinion which in turn drives the power take-off shaft when the power take-off clutch is engaged. This feature is of special interest because of the fact that the power take-off shaft may be idle at any or all times or may be running at any or at all times at the will of the operator, the engagement being made by a small lever used in engaging the clutch of the same type as that used to engage the different speeds within the transmission.

The power take-off shaft is also designed so that it may be taken straight out from the side of the transmission, or may be raised up from 6 to 8 inches by the means of a train of gears to allow the shaft to be raised higher above the frame or to clear the wheels if necessary. This is also a distinctive feature of the Cotta Tractor Transmission.

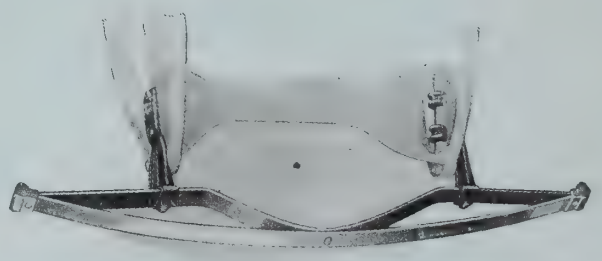
HILL 3A SPARK PLUG

THE Hill 3A Spark Plug is made by the Hill Insulating & Mfg. Corp., 511-513 West 42nd Street, New York.

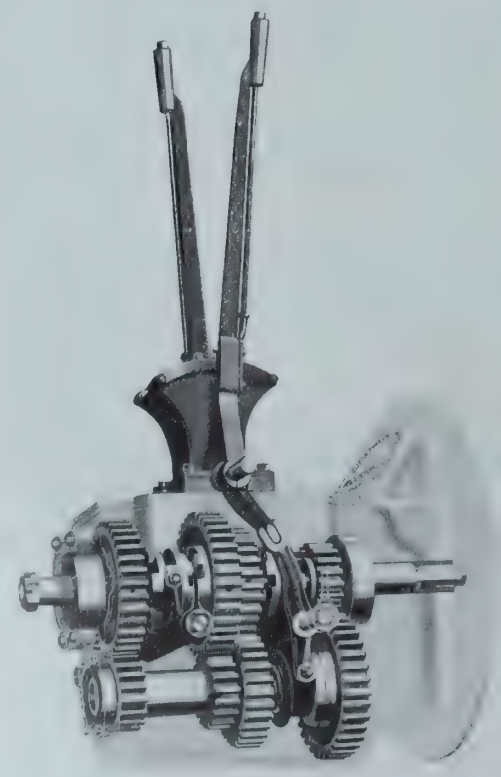


Cotta Jaw Clutch Transmission for Tractors, showing power take off.

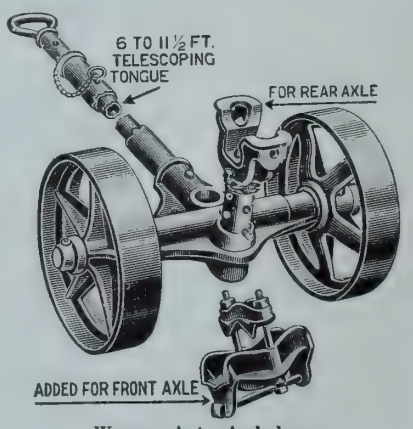
Hill 3A Spark Plug.



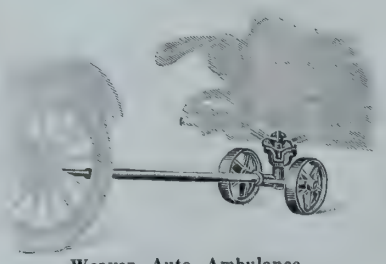
Halladay Truss Spring Bar Bumper.



Cotta Jaw Clutch Transmission, Unit Power Plant Type.



Weaver Auto Ambulance.



Weaver Auto Ambulance.

It is claimed that it is devised so that it functions under the abnormal condition which exists to-day, when gasoline does not fully vaporize and lubricating oil soon thins. This plug is also made with the open end conventional electrodes and has the cap which confines the ends of the mica. The porcelain top serves as a base for the terminal connections and enhances the appearance of the plugs—it has no electrical or mechanical function and may be broken or thrown away without interfering with the perfect service of the plug.

HALLADAY BUMPER

THE L. P. Halladay Company, Streator, Illinois, has just brought out a new bumper that is said to be the last word in spring bar construction. Technically speaking the front member is a spring bar forming an arc with a flexible chord or tie.

The practical result is a bumper bar of great elasticity so designed that a blow at any point is distributed throughout the entire length of the bar and thus absorbed before reaching its car frame.

The frame connection are the already well-known Halladay underframe clamp fittings that in no way interfere with any style of fender or splash aprons.

The extension arms are steel casting with reinforcing flanges on both sides, insuring great strength with light weight. There is a maximum range of adjustment for variation in width and curvature of the car frame.

Another feature that may not be fully appreciated till the time comes, and sooner or later it will, is the ample room between the rear bar and the front of the radiator, for cracking the motor when failure or lack of the mechanical starter makes such action necessary.

AUTO AMBULANCE

THE Weaver Auto Ambulance, manufactured by the Weaver Manufacturing Company, Springfield, Illinois, is a device for transporting disabled automobiles to the repair shop. The makers say, the Auto Ambulance is strong in design, but all unnecessary weight has been eliminated so that it may be placed in the towing car and carried to the wreck.

By removing or replacing one bolt, the tongue may be taken from or placed into the ambulance frame. It can be handled by one man, and is quickly attached to either the front or rear axle of any car. The height of the standard may be varied by a heavy pin, and the length of the tongue may be varied at will, from six feet to eleven feet six inches.

Large fourteen-inch cast steel wheels with three-inch face and broad roller bearings form an important part of the equipment. The telescoping tongue is of double strength steel tubing; the frame and saddles are of malleable iron; the axle is 1¼-inch steel, extending through the entire frame. The tread is twenty-inch.

C. G. E.

Automobile Accessories

"Tested for Service"

The great and growing tendency of all classes of the community is to buy articles of superior quality. C.G.E. Automobile Accessories are undoubtedly without a peer in their respective fields. It is for this reason that they are invariably accepted as standards of value wherever quality is the predominating feature.

ATWATER KENT IGNITION

On the firing line in war or in peace—wherever unfailing performance, simplicity and refinement of construction are required—there you will find Atwater Kent Ignition.

EDISON MAZDA AUTO LAMPS

Are made in Canada, expressly to withstand the severe usage Automobile Lamps are subject to. The electrical equipment of practically every well known car now in service has been designed to give its most efficient operation, when equipped with Mazda Lamps and for this reason Edison Mazda Lamps should again be installed when lamp renewals are required.

"KOPPER KING" SPARK PLUGS.

The body of a "Kopper King" Spark Plug is heavily coated with copper, which eliminates rust trouble. For satisfaction-giving qualities the "Kopper King" is without an equal.

GOLIATH SPARK PLUGS

A spark plug of careful construction and extra strength, well suited to meet the most strenuous demands of pleasure car or motor truck operation.

PYRENE FIRE EXTINGUISHERS

The Pyrene will extinguish the flames of blazing gasoline, kerosene, benzine, acetylene gas, etc., whereas water makes such fires worse, as it spreads the flames. It is safe and certain on electrical fires.

EDISON MAZDA LAMPS

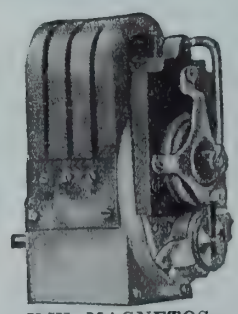
"Miss Irresistible," the smiling young lady portrayed above, is an enthusiastic booster of Edison Mazda Lamps. She knows that quality and service are the two strong points of these ever efficient lamps. Buy Edison Mazda Lamps wherever you see this girl in the window, and know what it is to be free from lamp trouble.

ATWATER KENT IGNITION

Atwater Kent Ignition is known throughout the automobile world for its accuracy and excellence of manufacture and for the scientific precision with which it operates.

RADIATOR AND HOOD COVERS

These covers are made in the combination rolling and split door type. They are well made from selected material and warranted to stand severe usage. When ordering state year and model of car.



K.W. MAGNETOS

K.W. Magnetos make an excellent source of supply for ignition systems, tractors and lighting outfits. They are of rugged construction and yet simple in operation. Absolutely nothing to get out of order.

Dealers everywhere sell C. G. E. Automobile Accessories

Canadian General Electric Company, Limited

Head Office - TORONTO

Branch Offices: Montreal, Quebec, Halifax, Sydney, St. John, Ottawa, Hamilton, London, Windsor, Cobalt, South Porcupine, Winnipeg, Calgary, Edmonton, Nelson, Vancouver and Victoria.

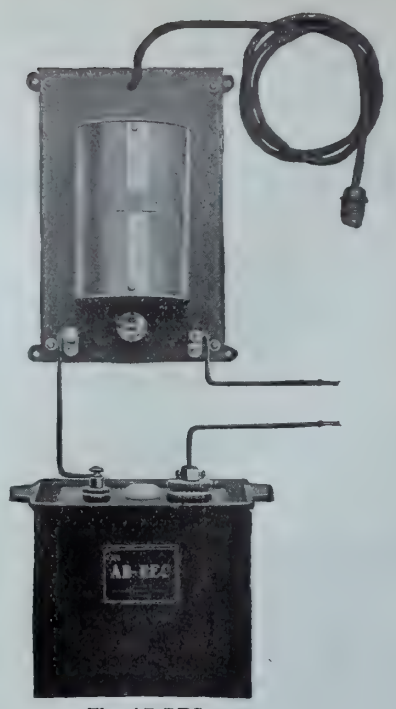
Manufacturers and Distributors of Electrical goods for every purpose. Wholesale only. Dealers everywhere sell C. G. E. Products.

THE AB-REC

THIS is a device that enables the charging of a 6, 8, 12, 18 or 20 volt storage battery from an alternating current circuit. The makers say it is as easy to manage as an electric household iron. The attachment plug is screwed into any socket where there is alternating current, then two wires are run from the Ab-Rec terminals to the storage battery that is to be charged. The socket key is then turned and the battery will receive direct current.

Ab-Rec will pass a current of about two amperes charging a six-volt battery and if charging a higher voltage battery the current will be somewhat less. A charging overnight will put a discharged battery into shape.

The Ab-Rec is completely automatic in that there are no regulating appliances, and it can't in ordinary use be overloaded or burnt out. It may be used satisfactorily where the line pressure drops as low as 50 volts, or it may go as high as 125; the frequency may be 25, 40, or even 140. It is made by the American Battery Company, Chicago.

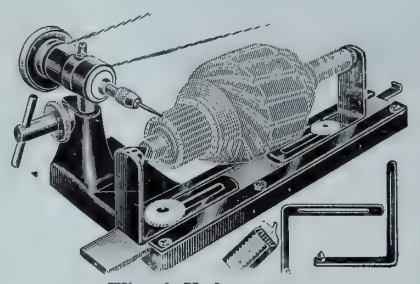


The AB-REC

WIZARD UNDERCUTTERS

THIS is a tool for turning down commutators. The makers of the Wizard Undercutter claim that it will turn out in two or three minutes, work which usually took about thirty minutes, and do it better. The adjustments are arranged to fit all sizes of automobile armatures. The Wizard Undercutter may be either permanently fastened on the bench or on a board as a portable and separate outfit, with a ⅛ to 1-16-horsepower motor, and adjusted by a pulley to give 7,000 revolutions to the cutting burr.

It is manufactured by Paul S. Niehoff & Co., Chicago.



Wizard Undercutter.

"OVER-THE-TOP" AUTO TOP

THIS is a cover designed to fit over the top of any car. It is easily attached, and is simple in construction. The makers say it makes a substantial re-covering for the original top, fits snugly, and provides extra protection. It is made of high-grade Du Pont Raynite Top Material and furnished with real glass or celluloid lights. The entire outfit weighs less than fifty pounds in the biggest sizes. It is fitted with side panels which can be removed in warm weather. It is manufactured by the Baker and Lockwood Manufacturing Co., Kansas City, Mo., under the Trumbly patent.

COMBINATION LOCK

THE Steen Combination Lock, which is being put on the market by the Canada Cycle and Motor Co., Ltd., Weston, Ont., is a bicycle lock for which the following claims are made. That it operates on the same principle as the combination of a safe and is therefore safer than the ordinary style of lock, and has the further advantage that no key is required. The lock is well finished and is guaranteed for a year.

OFFSET SPEED WRENCH

A SPECIALLY designed Geared offset Wrench for removing the 4th connecting rod nut of a Ford motor has recently been placed on the market by the Sawyer Sales Co., Lincoln, Nebraska. It is made of steel, having three-cut spur gears, machined, hand-forged sockets and heavy brace. The offset is 4¾ inches long, having three inches distance between the socket and brace rod. This allows ample distance to place the wrench in the crank-case and have the socket fit up directly on the nut of the fourth connecting rod. The upper projection of the brace serves as a bearing on the crank shaft and the lower part of the brace takes bearing against the crank-case. The brace is of one-half inch steel rod made with a ten-inch swing, thereby giving sufficient leverage to remove the tightest nuts.

The socket is of special design and removable.

The wrench is 17 inches over all and weighs 4 pounds.

Handle for Lewis Reamer.

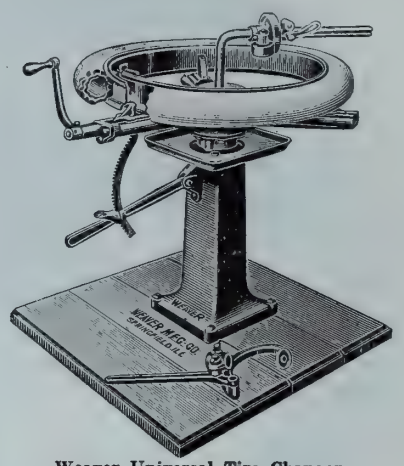
Lewis Reamer
Showing Position on Connecting Rods.

Lewis Reamer in Position on Main Bearing.

LEWIS COMBINATION REAMER

THIS interesting tool is for reaming the connecting rod and main bearings of Ford motors.

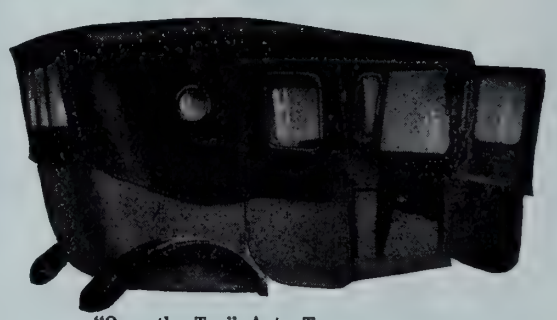
The makers, the Lewis Tool Co., Minneapolis, Minn., U. S. A., say it will do the work in one and a half hours which ordinarily takes eight hours to do by hand—the old way. As it does not require a skilled mechanic to operate, any ordinary garage employee can use it with perfect results.



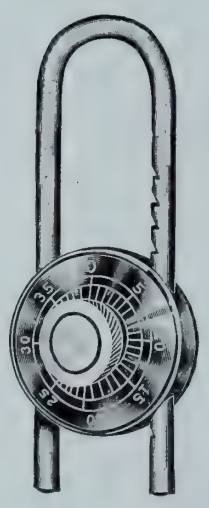
Weaver Universal Tire Changer.

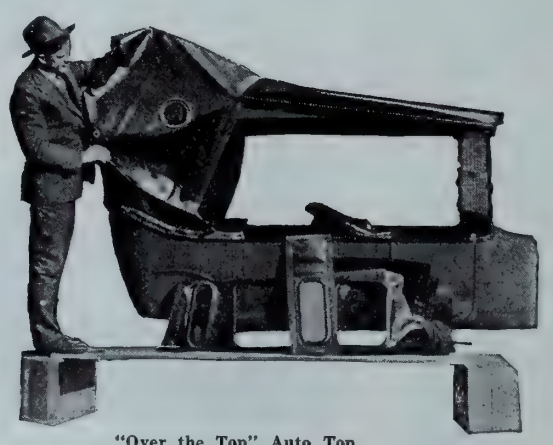
UNIVERSAL TIRE CHANGER

THIS tool is for dismounting and remounting all styles and sizes of pneumatic automobile tires. The makers say the most difficult tires can be changed in a few minutes. The tool is fitted with smooth-finished rollers to eliminate the possibility of injuring the casing or rim. It is constructed in a very compact way, and is easy to operate.



"Over the Top" Auto Top.





"Over the Top" Auto Top.

"PEERLESS" TRACTOR FENDER

THE "Peerless" Tractor Fenders are intended for Fordson tractors. They are made of very heavy gauge steel, finished in black enamel and furnished with the necessary irons and bolts for attaching to tractor. The makers, The Corcoran Manufacturing Company, Cincinnati, Ohio, state that the tractor fenders give the essential protection to both driver and engine and are easily attached.

NOVEL NUT LOCK

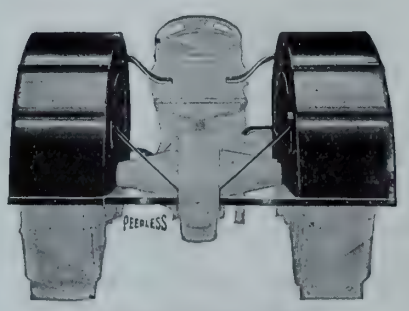
A NEW type of nut lock is being placed on the market by Edward A. Robinson Co., Ltd., of 228 Craig Street, Montreal. This Hold-Tite nut lock is a departure from the usual method, inasmuch as no additional nut is used, the lock being obtained by means of a specially-designed washer, the use of which, it is claimed, has many advantages over the extra nut variety of locking devices.

The method of applying the nut lock is extremely simple, but its simplicity is one of the greatest factors of its efficiency. The notched inner edge of the washer is placed against the outer surface of the nut after the same has been thoroughly tightened. The nut lock is then forced to its locking position by means of another nut, or forced down by the blows of a hammer. This action causes the edges of the notched portion to grip the thread close to the nut, and wedges the two so firmly together that no amount of vibration will change their initial locking position. The thread of the bolt is not distorted, and only a slight injury is made at a few points on the thread immediately adjoining the nut, but this has little effect on the removal of the nut when such is desired.

The nut lock being quite thin, it is an easy matter to split it when occasion requires. Another feature in this respect is the saving in the thread and bolt length, an important detail where many bolts are used and where lightness is essential.

Combination Lock

Offset Speed Wrench.



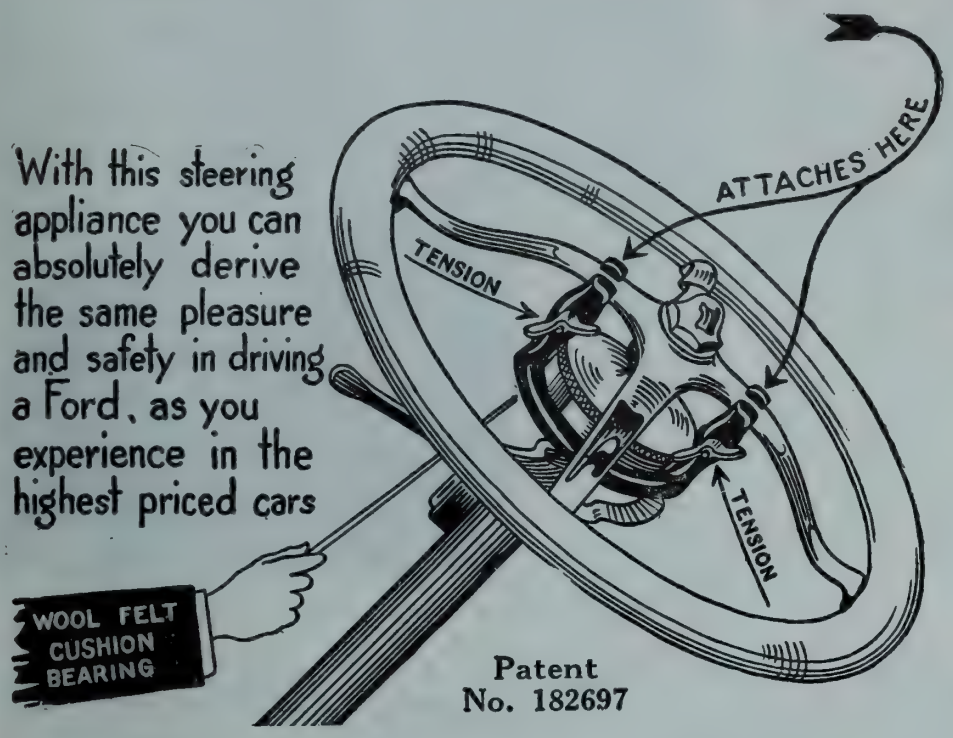
"Peerless" Tractor Fender.

We do not claim that the

Ford Steering Control

changes the Ford steering into a worm gear,
BUT we do maintain and all users admit that the effect is all and more than we claim for it.

With this steering appliance you can absolutely derive the same pleasure and safety in driving a Ford, as you experience in the highest priced cars



Patent No. 182697

THIS IS WHAT IT DOES

An easy seller and a good profit-maker

1. Relieves all the strain of gripping steering wheel.
2. Minimizes the danger of car swerving on rough roads, thus preventing accidents.
3. Economizes on gasoline, as the car is guided in a straighter line.
4. Saves tires by eliminating the quiver and friction on front wheels.
5. Reduces the rattle and shake fifty per cent., thus saving on repairs.
6. Practically does away with cold hands in winter caused by gripping the wheel tightly.

We challenge all other makes of steering devices, including worm gears, in contest, in the control, steering and driving of a Ford automobile.

Price to consumer $3.75. DEALERS, drop us a card for agency proposition and full particulars.

Distributors:
CANADIAN GENERAL ELECTRIC CO., TORONTO
VOKES HARDWARE CO., TORONTO

McKenzie, Crews & Company, Richmond Bldg., Toronto, Ont.

More Business for YOU

No. 6 STRAW CUTTER
Hand or Power
The Dandiest, Handiest Cutter Built.

No. 7 STRAW CUTTER
Twelve-inch Opening
A Large Machine With Great Capacity

Every farmer in your territory who feeds stock is a prospect for the dealer handling the

Peter Hamilton

Hand and Power

Feed Cutters

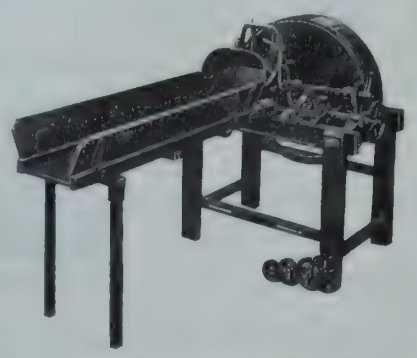
These cutters are appreciated on sight—they practically sell themselves. They will produce profitable business for you right now when other lines have slackened off. A little pushing of Hamilton Feed Cutters will start you off and build up sales for gas engines and other lines. We'll furnish you circulars for distribution on request if you will show Hamilton cutters and talk them up.
Made in all sizes, from hand machines to the power-run machines for the big stock raisers.
You can rely on Peter Hamilton goods—they make you friends. Write us to-day. Territories open for live dealers.

The Peter Hamilton Co., Limited

Makers of Agricultural Implements

PETERBORO ONTARIO

No. 3 PULPER
The Cleanest Cutting and Easiest Driven Pulper Manufactured



No. 7 BLOWER CUTTER
Extraordinarily Good for Straw Cutting.
We Also Build Mounted Blowers

"NIAGARA" ACCESSORIES

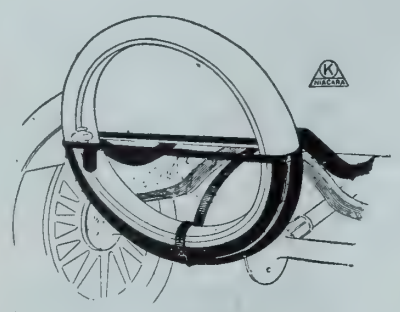
"Niagara" Jacks
Six good models

"Niagara" Pumps
Efficient and durable
Chrome leathers used throughout

"Niagara" Bumpers
Every Niagara Bumper is built with shock-absorbing springs

"Niagara" Tire Carriers
The Best Yet!

"Lyon" Resilient Bumpers
Save the car without spoiling the bar



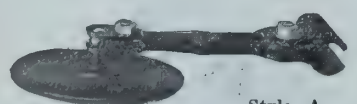
For Satisfaction
Specify "Niagara" Brand to your jobber; or write direct to the manufacturers.

Kinzinger, Bruce & Co., Limited
Niagara Falls Canada

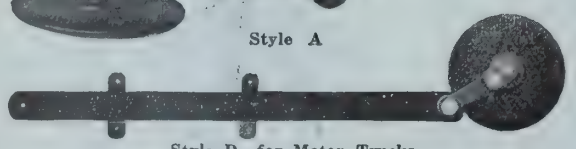
Hindview
AUTO MIRRORS

C Bracket for Closed Bodies

Style A—Long



Style A



Style D—for Motor Trucks

Style F for Front Fenders

The "Hindview" Auto Mirror prevents accidents by enabling the driver to keep an eye on the rear traffic without losing sight of the road ahead. Our Ball Joint allows immediate adjustment to any desired angle without the use of any tool.

Substantially made — nicely finished — has five inch plain, or lens, plate glass mirror. The lens mirror increases the field of vision about 50 per cent. without distorting the view. Note large, firm clamp for attaching to windshield.

Write for our folder showing complete line

Agents, Jobbers, Write for our Proposition

Superior Quality KALES STAMPINGS *Prompt Deliveries*

PRESSED METAL PARTS, LIGHT AND MEDIUM WEIGHT STAMPINGS

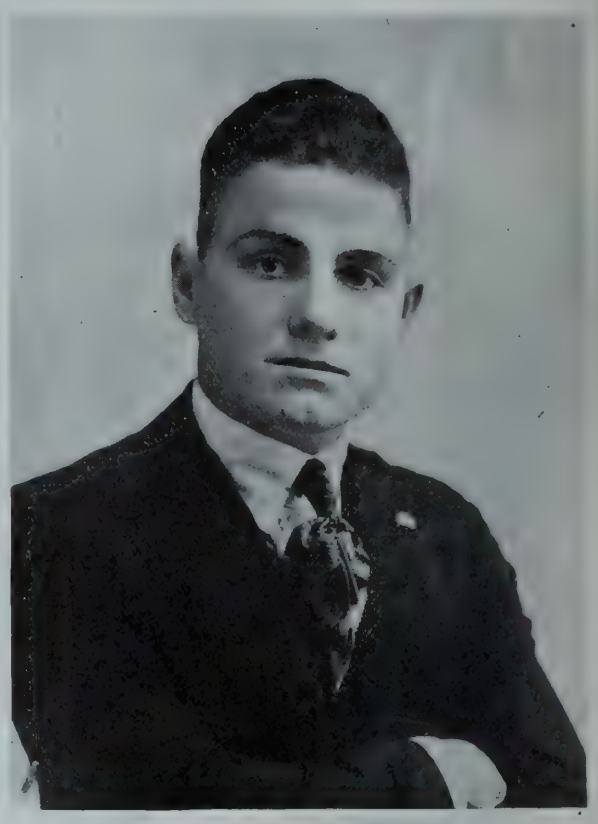
Our complete plant, superior equipment and efficient organization are at your service. You will insure satisfactory results by letting us make your stampings. Motor, axle, transmission and clutch stampings. Write to-day enclosing blue prints or samples for estimates and our catalog.

KALES STAMPING COMPANY
446 West Lafayette Blvd. Detroit, Michigan

Allis-Chalmers In Canada

THE Allis-Chalmers Tractor has invaded the Canadian field, where it will be distributed by the Canadian Allis-Chalmers, Ltd. The head office is at King and Simcoe Streets, Toronto.

G. E. Kamm, who is taking charge of the tractor division, comes from the Allis-Chalmers Manufacturing Company of Milwaukee, Wis., and had a wide experience covering over eight years of tractor work in all parts of the United States. Mr. Kamm states that he has great faith in the future of the tractor in Canada, and as the Allis-Chalmers line is comprised of sizes of tractors to meet every farmers' wants and need, whether a large farmer or a small farmer, Mr. Kamm is looking forward to a large volume of immediate business.



G. E. KAMM

The sales policy is to appoint distributors, jobbers and dealers, giving them a liberal working margin and an exclusive territory. The discounts are the same as prevail in the United States, and as the list prices are also the same as in the United States, the Allis-Chalmers forms a very attractive proposition. The Allis-Chalmers Manufacturing Company is one of the largest manufacturing concerns in the United States and has spent over $3,000,000 in the development of their present tractors.

The factory is now producing 50 tractors a day and as new facilities are being added, the men handling Allis-Chalmers tractors are assured of securing their scheduled shipments.

A glance at the Allis-Chalmers line shows a 6-12 General Purpose Tractor which may with ease be attached to any horse-drawn implements the farmer may have requiring 4 horses or less. For instance, it may be hitched to a binder, mower, disc or Moldbord plow, disc harrow, rake or potato digger, and special attention has been paid to cultivating of row crops inasmuch as the tractor has 28 inches clearance. A belt pully comes as regular equipment with the tractor and 12 horse power is obtained therefrom for stationary work. Two of these tractors may also be connected together, operating as one unit and forming a 4-wheel drive tractor for the heavier work. There is also the 10-18T a substantial two or three-plow machine and the 18-30.

FORD STEERING CONTROL

THIS new device, which is being manufactured and marketed in Canada by the McKenzie, Crews Co., Richmond Building, Toronto, was the subject of the brief note in the November issue of M. T. I., page 45, in which we regret that an error occurred. This was in reference to the principles of the device. The manufacturers have called on the editor to state that the principle is this: The Ford direct drive is given, by this device, the same effect as the higher-priced cars with worm drive. Large numbers of dealers are reported taking hold of this accessory.

1909, NOT 1919!

A VERY self-evident error crept into the November issue, page 50, in the story of Old No. 1 Oil-Pull, Advance-Rumely veteran tractor. The underline beneath the cut stated that this tractor was turned out in 1919. This was palpably incorrect, as anyone could see in reading the story in the next column. Old No. 1 was, of course, born 1909.

VETERAN CASE MANAGER DIES

W. C. WINSHIP, aged 83, one of the first branch managers for the J. I. Case Threshing Machine Co., died recently at his home in Lawrence, Kans. He entered the employ of the J. I. Case Co. in 1878, and was doing business for the company until January, 1917, when he retired.

GRAY-CAMPBELL PROGRESS

THE annual general meeting of the Gray-Campbell Company, Limited, was held in Moose Jaw recently in the new premises of the company, and was attended by all the officers and shareholders. Robert Gray, president of the three Gray interests, and J. P. Byers, secretary-treasurer, were among those present.

The operations of the company during the past year were conducted to the entire satisfaction of the officers and shareholders. In the Moose Jaw district, 150 cars had been sold, retail, during the past year. The company plans to increase the output of the Gray-Dort factories next year to two and one-half times the output of last year. Moose Jaw is the head office of the Gray Campbell Company.

E. B. COMPANY PROMOTERS

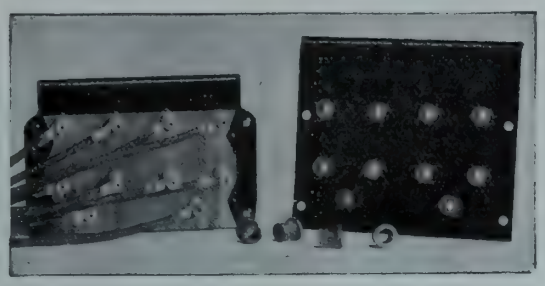
THE following changes have taken place in the Emerson-Brantingham Tractor Company, Rockford, Ill.:

F. M. White, who has been in charge of the Farm Power Bureau, has been promoted to assistant general sales manager.

Turner Berger, formerly assistant in the Extension Division, has been made assistant manager of the Power Farming Bureau.

H. P. Roberts, who has been in charge of the Extension Division, has been transferred to the Advertising Department as assistant manager. S. C. Hallock, of the Advertising Department, has been put in charge of the production of advertising literature.

"Casco"
Coil Box Protector



The Only Protector for FORD CARS Against Rain and Wet Weather

Ford cars frequently stall in wet weather. The water works in between the hood—into the coil box, causing short circuit.

This inconvenience is prevented if you use the "Casco" Box Protector. It covers the Ignition and Coil Box.

Dryness is guaranteed.

Without Rubber	$1.00
Rubber Insulated	1.50

"Casco"
Fan Belt Guide

Put on in a Minute
50c.
CASCO FAN BELT GUIDE
Pat. Applied For
Clamps here to Crank Case Flange
Clamps here to Crank Case Flange

"Casco"
Oil Drain Cock

Pat. Oct. 7, 1919

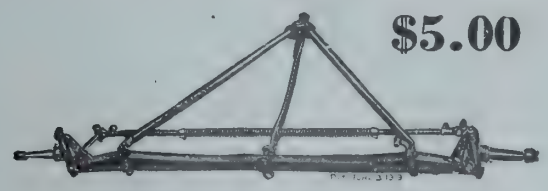
The "Casco" Oil Drain Cock is Automatic in action. No cock wrench is required.

No Ford owner should be without one, as it enables him to easily keep close tab on the oil level and prevent unnecessary wear of bearings.

Complete, per pair, $1.50

Hold 'Em in the Road

$5.00



"Hold 'Em in the Road" for Ford Cars

Here it is, the Radius Rod Brace, Anti-Rattler Axle Support and Safety Device all in one.

There is no Ford car accessory made that possesses such a strong combination of strength and safety.

Fits all model Fords to 1919 inclusive.

Sell These Ford Necessities

Every Ford Owner in Your Vicinity is a Good Prospect

Put this claim to the test by showing a Ford owner some of "Casco" products. He will go away with one or more of them—you make a sale and a good profit.

CASCO MANUFACTURING CO.
THOMASVILLE, GA., U.S.A.
Canadian Registration Applied for
A. H. Frazier, 1150 Homer St., Vancouver, B.C.
Manufacturers' Agent

CANADIAN JOBBERS
Merrick-Anderson Co., Limited, Winnipeg
John Millen & Son, Limited, Montreal, Toronto

NEWS — OF THE TRADE FOR THE TRADE

See also page 30

MARITIMES

TRURO, N. S.—Alonzo McCallum, dealer in Studebaker cars, is now carrying a large accessory line and doing vulcanizing.

MAHONE BAY, N. S.—The Mahone Garage Tool and Specialty Co. is adding an up-to-date machine shop to its automobile and motor boat supply line.

SYDNEY, N. S.—The Cape Breton Battery and Vulcanizing Co. has added Stewart trucks to its line. They also handle the Gray-Dort cars and Willard battery plant.

HALIFAX.—The Hawboldt Gas Engines, Limited, is opening a branch office and service station at 218 Lower Water Street. Arthur Freda, a gas engine expert, will be the manager of the new branch.

SYDNEY, N. S.—The agency for the Dodge Brothers motor car has been obtained by the Sydney Motors, Limited. The Sydney Motors have an up-to-date salesroom and service station at the corner of George and Townsend Streets.

QUEBEC

MONTREAL.—The Hochelaga Carriage and Garage Co. has succeeded the Hochelaga Carriage Co., which has been dissolved.

QUEBEC.—The Quebec Provincial Motor League will hold a meeting early in December, to discuss legislation affecting motorists.

Montreal. — The Crescent Motors, Ltd., capital $100,000, head office Montreal, has been incorporated to manufacture and deal in motors, tire casings, greases, oils, etc.

QUEBEC.—An agreement has been closed by the Quebec Department of Agriculture with the Cleveland Tractor Co. for a large number of tractors to be sold to the farmers of Quebec at cost price.

MONTREAL.—A. G. Watson, secretary of the Nova Scotia Motor League, visited the Automobile Club of Canada recently. He stated that road making during the past season had been carried on extensively in Nova Scotia.

MONTREAL.—The directors of the Montreal Automobile Association are making an effort to have the road between Montreal and Ste. Anne de Bellevue kept open with snow plows all winter. They have interviewed the various municipalities and in every case the matter has been favorably considered.

MONTREAL.—Victor Levesque has been appointed by the directors of the Montreal Automobile Trade Association to be the manager of the forthcoming automobile show. The opening of the show is fixed for January 17, and will be held in the large garage, located on the Montee du Zouave, with entrance from Sherbrooke Street East, near St. Denis.

MONTREAL.—The first Canadian Fiat sales agency has been established at Montreal by Dr. Elmo de Paoli, who is at present in North America, studying the automobile market. The Italian-Canadian Trading Co. will handle the agency and will form the Italo-Canadian Motors Co. for the sale of Fiat cars. The president of the new company will be Mauro Marengo.

ONTARIO

GODERICH.—P. J. MacEwan, Ford dealer, now has the Overland agency, too.

CLINTON.—Bert Langford, garage operator, has taken on the Brisco agency.

SEAFORTH.—L. Eberhart has extended his machine shop, and now has a fine plant, 90 x 30.

HAVELOCK.—F. Dean has opened a new garage in Ontario Street, opposite the Methodist church.

WALTON.—W. J. Reid, a farmer at R. R. No. 4, has built a garage, 40 x 40, and will also handle implements.

MANITOBA

WINNIPEG.—The Manitoba Good Roads' Association recently held its annual convention in Winnipeg.

ST. BONIFACE.—A new branch is being built by the Dominion Car Wheel and Foundries, Limited, to cost about $60,000. The building will be 70 x 200 feet.

WINNIPEG.—The Emerson Manufacturing Co. is now the sole manufacturer of the Emerson separator. Mr. Emerson, the inventor, recently sold out to this concern.

WINNIPEG.—Frank Watson has one of the best equipped tire repair shops in the city. It is known as the Watson Tire Service.

WINNIPEG.—A Winnipeg concern has placed a million dollar order for automobiles with the General Motors Corporation, Oshawa, Ontario.

WINNIPEG.—W. H. Emerson, inventor of the Emerson wild oat separator, visited Winnipeg recently to superintend the installation of the die presses used in the manufacture of Emerson sieves.

WINNIPEG.—Charles Jordan has been promoted to the managership of the Crossen Metal Works, Ltd., successor to the Winnipeg Steel Granary and Culvert Co.

WINNIPEG.—George Neaving, vice-president of the Manitoba Motor League, has issued a circular recently for the Brandon Automobile Club picturing a Case tractor on the roads in the Brandon district.

WINNIPEG.—A short circuit on a car is said to be the cause of a fire recently at the City Garage, Portage Avenue. Three cars were damaged by fire and others by water. The total damage is estimated at $2,000.

WINNIPEG.—J. W. Pomeroy, manager of Motorlife, Limited, has announced that early in January a factory for the manufacture of "Motorlife" will be established in Winnipeg. He also states it is the intention to move the headquarters of the company from Weyburn, Sask., to Winnipeg.

NEEPAWA.—The Neepawa Garage Co. is extending business and branching out into a new field. It is taking on the agency for Fairbanks-Morse lighting plants, J. I. Case engine plows, Nicholls-Sheppard threshing machines, Wallis tractors and other lines. H. R. Rutledge will be retained as business manager, and both T. K. and Adam Johnson will continue as mechanical experts.

SASKATCHEWAN

SASKATOON.—R. Malabone, formerly I. H. C. salesman, has been promoted to blockman.

ARCOLA.—The tire repair shop owned by L. Hanna, is closing for the winter and will re-open in the spring.

CRAIK.—The City Garage is under new management and is doing business in repairs of all kinds and vulcanizing.

ESTEVAN.—J. H. Sissons, formerly on the Estevan sales force of the International Harvester Company, has been made a blockman.

QU'APPELLE.—The Western Auto Accessories Company, Ltd., capital $60,000, has been granted a charter, and will have its head office here.

REGINA.—A $30,000 garage will be built by the Gray-Dort Motors, in Cornwall Street. The new building will have a 50 feet frontage and be 100 feet deep.

REGINA.—Licenses for Manitoba and Alberta, have been obtained by the Canadian Oliver Chilled Plow Works, Limited, whose headquarters are in Regina.

CRAIK.—A vulcanizing plant has been established in Craik. The machinery required in the business has been ordered and a staff of workmen is already on the job.

REGINA.—Bowman Bros., Limited, of Saskatoon, dealers in automobile supplies, are opening a branch at 1708 Scarth Street. An exclusively wholesale business will be conducted.

REGINA.—A fire, caused by throwing hot ashes against the wall, recently destroyed the garage at 2339 Montreal Street, owned by William Wallace. A light six McLaughlin car was also destroyed. The damage was estimated at $1,200.

REGINA.—Work on the new Williams Automobile Showroom and Service Station in Cornwall Street, has been begun. The show room will be one storey with basement, and will contain one of the largest parts rooms in Western Canada. The show room will be 50 x 35 feet, the parts room, 52 x 20 feet. The new establishment will cost $30,000.

REGINA.—D. L. McQuarrie, better known as Mack, Western Representative for Cleveland Tractors, at Regina, has decided and acted upon his decision (as usual) that he was in need of a partner. The outcome of this decision means he has again demonstrated his selling ability in selling his services for life, having taken unto himself a wife. Mrs. and Mr. McQuarrie spent a few days in Winnipeg, at the Royal Alexandra Hotel, before returning to Regina, to increase the sale of Cleveland tractors.

I.H.C. LOSES ITS TRAFFIC MANAGER

THROUGH the death of Frank B. Montgomery on November 24, the International Harvester Company has lost one of its ablest officials and American railroading, especially the field of industrial transportation, is deprived of a leading figure and a vital force. Mr.

F. B. Montgomery.

Montgomery was more to the Harvester Company than was told in his title of Traffic Manager. The system of transportation whereby raw materials are kept flowing in a steady stream to the company's factories in the United States and Canada, and finished goods are likewise kept constantly moving from factory to farm—this highly efficient mechanism was chiefly of his creating. He was born in 1864 and joined the I.H.C. in 1902.

ALBERTA

CALGARY.—Messrs. Lougheed and Taylor are building a fine modern garage on Ninth Avenue, between First and Second Street west, at a cost of $30,000.

CALGARY.—The Acme, a new workshop opened at 415 Fifth Avenue East, does high-grade auto and coach painting. Body building, and alteration in auto and trucks, is also handled.

BRITISH COLUMBIA

NANAIMO.—One of the "100% Honor Flags" has been won by the Auto Transfer Co.

FERNIE.—The partnership is announced of W. Hobbs, H. E. Marks and L. E. Clark, in the Autoneed Co.

VANCOUVER.—A. P Reynolds and R. Wilkinson have entered into partnership in the Reynolds Motor Garage.

VICTORIA.—The partnership is announced of John Morrow and Victor Plummer in the Dew Drop Inn Garage

NEW WESTMINSTER.—The McLean-Burr Auto Co. garage, which was burned down some time ago, has been rebuilt and is now ready for business.

NANAIMO.—Sapper Robert Cain has entered into partnership with W. McDonald, formerly of Vancouver. They have purchased the interests of J. Bennett in the Crescent Tire Co.

VANCOUVER.—C. H. Leich, H. Capell, and C. L. Layland have opened a garage on Howe Street. The new firm is known as the Owl Motor Co. All three proprietors are returned soldiers.

VANCOUVER.—Alderman Frank Woodside has the agency for the General Motor Company tractors and trucks. He is an enthusiastic champion of good roads and does all he can to boost this cause.

VANCOUVER.—A new cleaning and polishing establishment for automobiles, known as the "Auto Beauty Parlors," has been opened near Victoria Drive, Grandview, a popular residential district of Vancouver.

STEWART.—The Premier Gold Mining Co., is trying out a motor sled ore truck with a view to installing motor haulage. If the truck proves successful, others will be ordered in sufficient number to handle the company's increasing tonnage.

VANCOUVER.—The Standard Motor Co. has opened a new garage in Mount Pleasant. The building is of reinforced concrete and brick construction, and covers an area of 6,000 square feet, and is situated at the corner of Kingsway and Eighth Avenue. It cost in the neighborhood of $25,000.

VANCOUVER.—A. G. McCandless and his son, P. A. McCandless, have built a modern garage at 650 Howe Street. They were recently incorporated and have been appointed local distributors of the Diamond T truck. They will also handle a complete stock of truck accessories. P. A. McCandless was in the R. A. F. during the war.

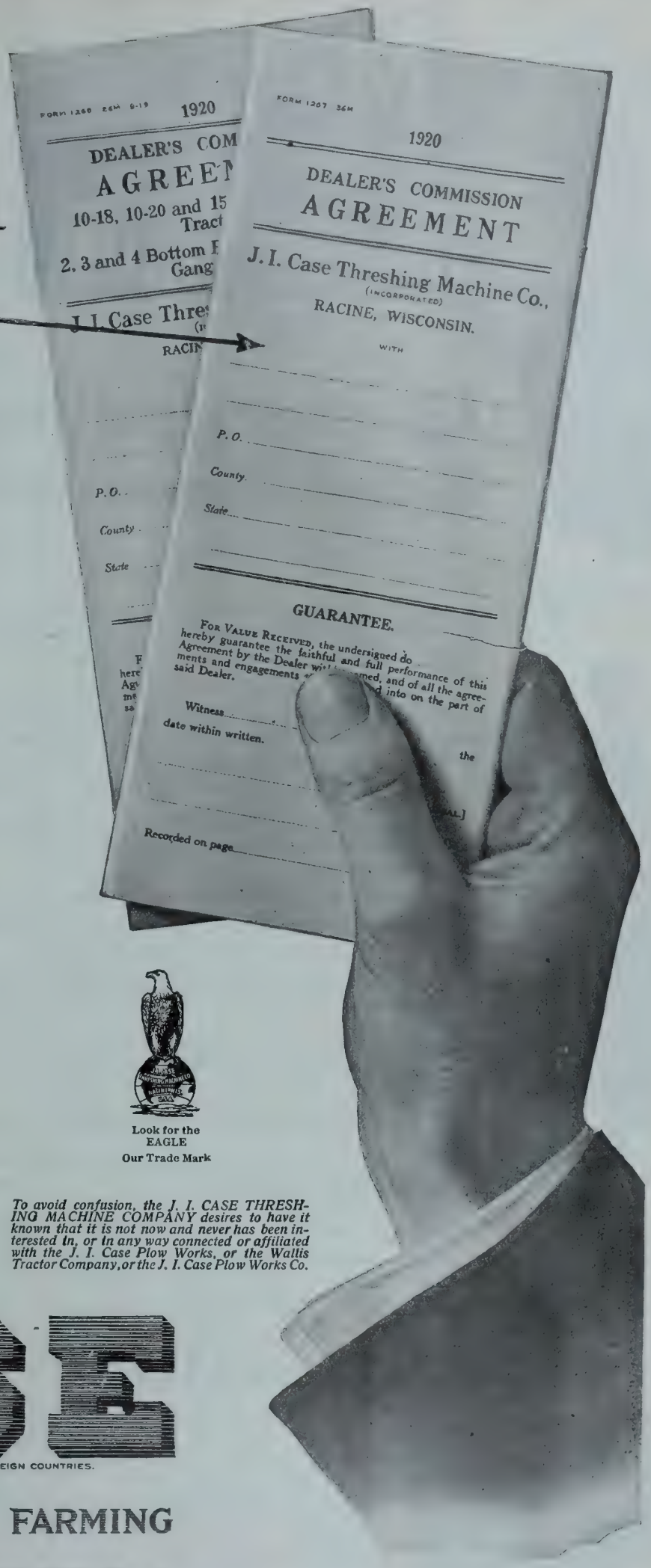
UNITED STATES

TRENTON, N. J.—The Studebaker Corporation has increased its capital stock from $45,000,000 to $90,000,000, which is divided into 900,000 shares at $100 each at par.

FLINT, MICH.—Walter P. Chrysler, vice-president of General Motors Corporation, has resigned. It is understood his retirement is due to differences with President W. C. Durant, on matters of policy. Mr. Chrysler was for years president and general manager of the Buick unit of General Motors Corporation at Flint.

DETROIT.—The General Motors Corporation is erecting an office building in Detroit, which, it is said, will be the largest in the world. It will be known as the Durant Building and will occupy approximately 500 x 400 feet of ground. The office itself will be 500 feet long, 60 feet wide, and five stories high. There will be 32 elevators in the building. Officials' and employees' dining and club rooms will be a feature.

Have Your Name Written Here



NOW is the time to renew the old, or secure the new Dealer's Agreement for 1920 with the J. I. Case Threshing Machine Company.

We are right at the threshold of the 1920 selling season. Your prospects are thinking of their requirements and planning for their purchases. The time is ripe for you to be providing for their needs and planning for your sales.

There is every indication of "banner business" for 1920. Power Farming machinery has come into its own. The scarcity and cost of farm labor,—the demand for increased production,—the growing tendency of bankers to favor financing the purchase of the best power farming machinery,—all are factors in your potential profits for 1920. They are all reasons why you should not postpone your arrangement for Case Dealer's Agreement for 1920.

Think of Case machinery as a great line—identified by the trade mark of the Eagle on the Globe. Units of this line are properly related to each other. Case Threshers, Case Silo Fillers, Case Road Graders, Case Baling Presses, Case Rock Crushers, Grand Detour Plows and Disc Harrows are built in sizes to meet every working requirement. Remember also that these machines are best drawn or driven by the properly related size of Case Kerosene Tractor or Case Steam Tractor.

See our travelling representative or write us direct regarding Case Dealer's Agreements.

Look for the
EAGLE
Our Trade Mark

To avoid confusion, the J. I. CASE THRESHING MACHINE COMPANY desires to have it known that it is not now and never has been interested in, or in any way connected or affiliated with the J. I. Case Plow Works, or the Waltis Tractor Company, or the J. I. Case Plow Works Co.

CASE

TRADE MARK REG. U.S. PAT. OFF. AND IN FOREIGN COUNTRIES.

POWER FARMING

MACHINERY

J. I. CASE THRESHING MACHINE COMPANY, Inc. **Dep't O-12, Racine, Wis., U. S. A.**

Makers of Superior Farm Machinery Since 1842

NOTE: We want the public to understand that our plows are NOT the Case plows made by the J. I. Case Plow Works Co.

No. 501
⅞" Standard with
Three-in-One Terminal

No. 503
⅞" Long with
Chevrolet Ball Terminal

M&S the PLUG with the Hotter Spark

Made in Canada

No. 500
½" Standard with
Three-in-One Terminal

Quicker Ignition
Better Combustion

That is what the M. & S. Spark Plug will accomplish for you.

Isn't it abundantly worth the trifling cost of a set of plugs—just to know what the M. & S. hotter spark means to you.

Try them.

M. & S. Spark Plug No. 500 is "Standard Equipment on Model No. 4 Overland

See that ball-point in the picture? It concentrates the current and intensifies the heat, thus giving quicker ignition and better combustion which means increased power.

The difference in pep and vim in your car will surprise you.

The interchangeable porcelain is another big convenience. Porcelains can be purchased separately. Our high heat test ensures freedom from sparking troubles.

The Center Electrode is one-piece (not welded) 97% nickel steel.

The three-in-one terminal is adapted to any style of ignition wiring. Special Chevrolet model ball terminal.

M. & S. Plugs are Canadian made by Canadian workmen. Materials and workmanship are of the highest standard.

Our strict guarantee—complete satisfaction or free repairs or replacement.
Order from your nearest jobber or write direct for descriptive circular.

Machine and Stamping Co., Limited

Commercial Dept.—Russell Motor Car Co., Limited

1209 King Street West **Toronto, Ontario**

Also Models No. 502 ⅞" long "3 in 1" terminal and Model No. 506 ½" long.

50

Costs Little—But

THOUGH you protect your home—your barn—your stock with insurance against fire does not free you from the loss following damage to many valuable documents and papers that maybe you now keep in an ordinary locked drawer.

The extra protection against fire, loss or theft outweighs the slight cost of installing a "Taylor" 199—It just fits the Farm Home.

Dealers and supply houses write for terms.

J. & J. Taylor
LIMITED
Toronto Safe Works
TORONTO

NEW ADVANCE-RUMELY BRANCH

THE Advance-Rumely Thresher Co., Inc., Laporte, Ind., announces the opening of an independent branch house at Pocatello, Idaho, in charge of A. Fiala, who has been travelling over the Pocatello territory during the past year. The new branch which the company has just erected is equipped in the most modern style.

CHAMPION PLANT NEARLY COMPLETED

THE new plant of the Champion Spark Co. of Canada, Ltd., located at Windsor, Ontario, is rapidly nearing completion, according to advices received from Arthur J. Hayes, Canadian sales manager of the spark plug concern. He states that by the first of the year the factory will be in production and that henceforth all Champion spark plugs used in Canada and the British possessions will be manufactured at and shipped from Windsor. The building when finished will contain 15,840 square feet of floor space and will have a production capacity of approximately 35,000 spark plugs per day. Up to the present time twelve automatic machines have been installed and it is planned to increase this number to thirty-five or forty as quickly as possible.

DRIVE AS IF THE OTHER FELLOW WAS AN IDIOT

THE Halifax Automobile Association, safety first advocate for motor car operation, has sent the following to its members:

Drive as if the other driver was a born idiot.

Drive as if all children and most pedestrians were bent on suicide beneath your wheels.

Drive as if every hill had a chasm at the bottom.

Drive as if every curve was a highwayman, a Bengal tiger and a stone wall.

Examine your car before you start, not after you stop, and you won't have accidents.

WHAT HO! A POEM!

A TRACTOR dealer was inspired after the Chatham demonstration to write a poem. We don't like to encourage poets, as a rule, but here is the tractor man's effusion. Some class, what?

—The Ace.

I'd been workin' pretty steady, long since the early fall,
A' turnin' furrers late and early with old Kate and Moll;
Slow and easy both of them, and sure they ain't bad actors,
But somehow I got thinkin' of them new-fangled tractors.

One night I said to Mandy, "Let's go a'galavantin',
They're plowing down at Chatham with tractors big and bantam."
Mandy was right willin', so we set out good and early,
In case the old bus-wagon bucked up or acted surly.

When we rolled into Chatham, I could scarce believe my eyes,
For tractors here and tractors there were buzzin' thick as flies.
One of them was all dolled up with reins and bit and bridle:
Hummin' 'long, some crawled, some crept, but ne'er a one was idle.

Lift a lever, turn a wheel, no cussin' old Moll or Kate,
Doin' in an hour or so, what would probably take me eight.
I tramped furrers up and down, forgetful of my dinner,
"Though I ain't no sporting gent," say I, "I'll buy the winner."

At last about decidin' that one was good as t'other,
I set out across the fields to have a talk with mother.

A piece of ground then ketched my eye with furrers so even,
It seemed a picture painted, my eyes must be deceivin';
And down that field a tractor came, so smooth and easy like,
The plows they seemed no load at all, she must be running light.

But the furrers they were turnin'—at last I found the Ace—
I looked to see the monniker, 'twas printed: J. I. Case.
So I got my money's worth, a mighty pleasant factor,
I bought the CASE that won first prize from every other tractor.

H. B. F. A.

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

IS

A CANADIAN COMPANY offering service of interest to and in the interest of Canadians.

Time payments made possible and profitable for Manufacturer, Dealer and Customer. Of particular interest to Automobile and Musical Instrument Trades.

LET US KNOW YOUR REQUIREMENTS

THE COMMERCIAL CREDIT COMPANY OF CANADA LIMITED

Bank of Hamilton Building, Toronto, Ontario
McArthur Building, Winnipeg, Man.

WE GIVE

"Quality and Service"

IN

TRACTOR and TRUCK STEEL CASTINGS

JOLIETTE STEEL CO., LIMITED

903 Read Building, Montreal
JOLIETTE, P.Q.

Lubricants of Quality

A LITTLE GOES A LONG WAY

HARRIS
TRADE MARK-REG U.S. PAT. OFF.
OILS AND GREASES

AND EVERY DROP COUNTS

HARRIS TRACTOR CYLINDER OILS

MADE IN FOUR GRADES

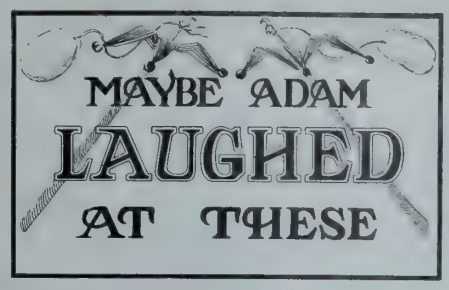
HEAVY, EXTRA HEAVY, SPECIAL AND EXCELLO

from Premium Pennsylvania Crude by a careful process to meet the exacting conditions of the Tractor Motor---HARRIS OILS have a high fire test and are very viscous. One of the four grades above listed will properly lubricate any Tractor---HARRIS OILS have been on the market for over 35 years and have won the distinction of being

AMERICA'S LEADING LUBRICANTS

Write for Prices and Booklet

A. W. Harris Oil Co.
326-328 South Water St.
PROVIDENCE, R.I.



Order Reversed. — "Motoring has changed things."

"Yes, my wife formerly had to have seven dresses to go to one hotel. Now she has one dress and we go to seven hotels."—*Louisville Courier-Journal.*

* * *

Why Grace?—Bobbie was accompanying his mother on a shopping expedition, and they at length reached the tea room. As the little boy was about to attack the toasted scones his mother whispered, "You haven't said your grace, dear."

Bobbie looked mildly surprised. "But," he said, "we are paying for this, aren't we?"

* * *

"Go to the Head of the Class"—A Sunday school teacher asked the scholars with what weapon Samson killed so many Philistines. All hesitated, when the teacher, to elucidate their minds, pointed to her jaw, and said, "What's this?"

A light broke triumphantly upon one of the scholars, who exclaimed, "I know, the jaw-bone of an ass."

* * *

Always A Limit.—A certain good woman was so painfully neat that she made life wretched for her family. One of her rules was that all the members of the household must remove their shoes before entering the house.

"Bill," she whined one day to her husband, "I found a grease spot on one of the dining-room chairs, and I think it came off those pants you wear in the shop."

"Well, Mirandy," shouted Bill, his patience exhausted, "for the last 15 years I've taken my shoes off every time I came into this house, but I'll be hanged if I'm going to go any further."

* * *

Help!—One of our young bachelor time-keepers *almost* got himself engaged the other evening, and has been pale and shaky ever since.

He called upon a certain charming young lady to take her and her mother to the Colonial Theatre, and the following conversation took place:

Girl: "I hope we won't miss the first act; we've waited a good many minutes for that mother of mine."

Our friend (impatiently): "Hours, I'll say."

Girl: "OURS! Oh, sweetheart!!" And she laid her blushing cheek right on my clean shirt front, avers the young man.

* * *

"Powerful Sick."—In the bright sunlight on a railroad station in Georgia slept a colored brother. He snored gently, with his mouth ajar and his long, moist tongue resting on his cheek like a pink plush necktie. A Northerner climbed off a train to stretch his legs, unscrewed the top of a capsule and dusted the grains of quinine on the surface of the darkey's tongue. Presently the negro sucked his tongue back inside his mouth and instantly he arose with a shout and looked about him wildly.

"Mistah," he said, "kin you' tell me whar I kin fin' a doctah?"

"What do you want with a doctor?"

"I'm powerful sick."

"Do you know what's the matter with you?"

"Sutt'inly I knows wut's de mattah with me—mah gall's done busted."

BT Steel Stalls Are Heaviest

The heaviest materials which it is possible to obtain are used in BT Steel Stalls.

The tubing used in posts, partitions, and head rail is ⅞" (commonly termed as 2-inch) solid welded, full weight steel tubing. It weighs 2.68 pounds per foot. We use no hard steel tubing or light grades in our stalls.

BT Steel Stanchions are made of heavy U-Bar Steel 5/32 inch in thickness. The material weighs 1½ pounds per foot and will stand tremendous strains.

BT Stalls stand up under heavy use. They will stand rust and the rough treatment of the cattle and give satisfaction as long as the walls of the stable stand and the floor lasts.

Write for further information about BT Steel Stalls to nearest branch.

Beatty Bros., Limited

Winnipeg, Man. Fergus, Ont. Montreal, Que. Edmonton, Alta. London, Ont. St. John, N.B.

16 Holborn Viaduct, London, England.

Steel BT Stalls

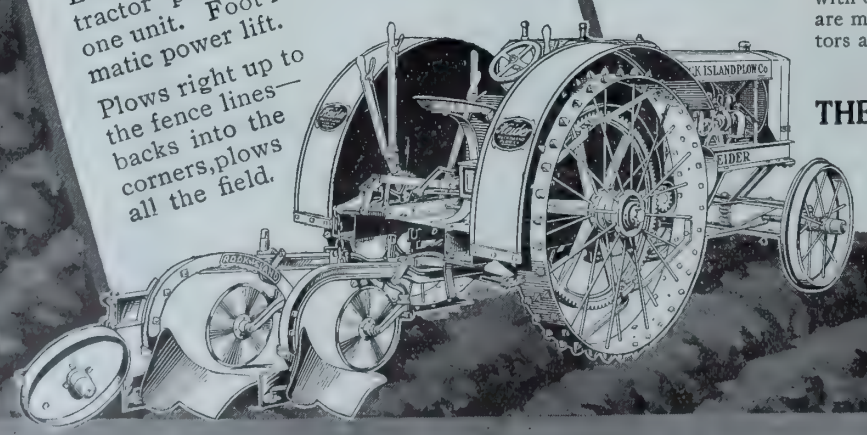
Heider Model C 12-20
With Rock Island No. 12
Tractor Plow

Rock Island
No. 38 One-Man
Tractor Disc
Operated From
Tractor
Cab

It's Easy to Sell This Practical One Unit Plowing Outfit

The Heider Model D 9-16 with a two-bottom No. 9 Rock Island Power Lift Plow attached right onto the tractor platform. Entire outfit in one unit. Foot lever control. Automatic power lift.

Plows right up to the fence lines—backs into the corners, plows all the field.



Why

Heider

Dealers Are Making the Sales Records of 1919

LETTERS from our dealers in all parts of the country bring the news that they are doubling and many are *tripling* tractor sales with the Heider.

In every case they give two reasons: The Heider's 11 years' actual field work, and the fact that the Heider *stays sold* with the least service expense.

The famous Heider Patented Friction Drive gives seven speeds forward and reverse all with one motor speed—all with one lever for traction or belt work. Waukesha 4-cylinder heavy-duty motors burn either kerosene or gasoline.

Waterloo Threshing Machinery

Waterloo CHAMPION Separators are backed by a firm with over sixty years' manufacturing experience. They are made in special sizes to be coupled with Heider Tractors and make an ideal combination.

Full information gladly furnished upon request.

THE WATERLOO MANUFACTURING CO.,
LIMITED
Established 1850

Head Office and Plant:
67 King Street
WATERLOO, ONTARIO

Branches at
Portage La Prairie, Man. Regina, Sask.
Saskatoon, Sask.

ASPINWALL MEETING

THE annual meeting of the stockholders of the Aspinwall Manufacturing Company was held at the Company's offices, Jackson, Michigan, November 15. The reports as given of the past season's business showed the company in a prosperous condition, the number of sales booked to date exceeding any previous record in the history of the company. At the meeting of the Board of Directors which followed that of the stockholders, the following officers were elected: President, L. Aug's Aspinwall; vice-president and general manager, G. G. Rowley; treasurer, C. H. Whitney; secretary, E. R. Doolittle.

LIGHTING DEMONSTRATION

BRANDON.—A practical demonstration of the efficiency of a lighting plant was held by J. F. Smith, superintendent of the Alamo Lighting plant. Mr. Smith showed dealers and prospects how the plant should be dismounted and re-assembled, and afterwards entertained the crowd at a luncheon, where various points of mutual interest were discussed.

Result of demonstration? Three new agents were signed up, and fifteen plants were sold.

Western Motors handle this lighting system in this locality, and they have constructed a special trailer on auto wheels to carry the plants to all country points for demonstration purposes. This "bringing the plant to the farmer" has proved a big success.

FIAT SUCCESSES

AT the tractor contest held in Tirlemont, Belgium, under the patronage of H. M. King Albert and the control of officials appointed by the Ministry of Agriculture, the Fiat tractor was awarded first prize, with 94 points out of 100. First prizes were also awarded the Fiat at Senlis, France, and Buenos Ayres.

AUTO PROFITEERING IN ENGLAND

LONDON, England.—A determined effort to break up profiteering in automobiles is being made by the British Motor Trades Association and the Motor Agents' Union. Heavy fines have been imposed in cases where agents have advanced the prices fixed by the manufacturers. If the dealer refuses to pay the fine, he is cut off from all source of replenishing his stock.

Another form of profiteering in cars is often encouraged, it is said, by the private automobilist. On receiving a new car the owner in a number of reported cases has resold it to a second-hand dealer and pocketed an immediate profit of $500 or more. Such is the demand for cars that the second-hand dealer has no difficulty of disposing of the automobile at another $500 profit for himself.

Owing to the shortage of cars every dealer has a long list of expectant purchasers, and attempts have been made to bribe salesmen to shift the names of waiting customers from the bottom to the top of the list. In one instance reported to the Motor Agents' Union, the bribe offered a salesman was $750.

TEN TRACTORS SOLD

MR. NEARING, manager of Western Motors, Brandon, Man., reports that he has sold ten tractors during the past season, as well as large numbers of plows and discs. There has been a good demand for cars, and there is so much money in sight for the energetic car dealer that there is but little demand for used cars—the customers are demanding new cars. Spring orders on new cars are already being booked.

GENERAL MOTORS WILL EXPAND

GENERAL MOTORS CORPORATION is expanding its Canadian construction program. The large building work now in progress at Walkerville is being extended to permit of the manufacture of transmissions. This decision will have the effect of increasing the proportion of the actual manufacture in Canada. The plants are of most modern construction, every effort being made to make desirable working conditions. A fine and very efficient lighting system is being installed.

The Walkerville site is 38 acres in extent and is located on the Walker road. The expenditure there is estimated at $6,000,000, and the entire appropriation of the Corporation for extensions this year in Canada and the United States is $37,398,000.

NEW BEAVER TRUCK

HAMILTON, ONT.—The Beaver Truck Builders, Ltd.,, is a new concern organized here. The organization of the company has now been completed and production has been started in a well equipped plant on Adam Street. The first truck was recently completed. Plans are already in hand for additions to this plant.

This is an exclusively Canadian company. The president is W. J. Lord. H. R. Williams is vice-president and managing director. He was formerly chief engineer of the Smith Motor Corp., Chicago, and served with the Allied Truck Commission at Washington.

The Beaver truck, it is stated, will be 80 per cent. a Canadian product, practically everything entering into the truck being made in its own plant. At the present time the company is confining its attention to a 2-ton truck. In designing the Beaver truck, Mr. Williams has incorporated the leading features of the special military type of truck, as standardized by the Allied Truck Commission. The rear axle is of worm drive, with forced feed oiling system to the worm, allowing unusual road clearance.

"SELECTING YOUR TRACTOR"

THE Cleveland Tractor Co. has issued a handsome booklet, entitled, "Selecting Your Tractor," which shows how the Cletrac is adapted to the farmers' needs for motive power. Considerable space is also given to seed bed preparation and also to the discussion of power farming cultivation. The booklet is printed in two colors, contains many photographic illustrations, and has striking four-color cover.

ROLLER-SMITH OFFICE

THE Roller-Smith Company, 233 Broadway, New York, N.Y., announces the appointment of the Alfred Collyer Company, 420 Power Building, 83 Craig Street West, Montreal, Canada, as its agent for the entire Dominion of Canada and Newfoundland.

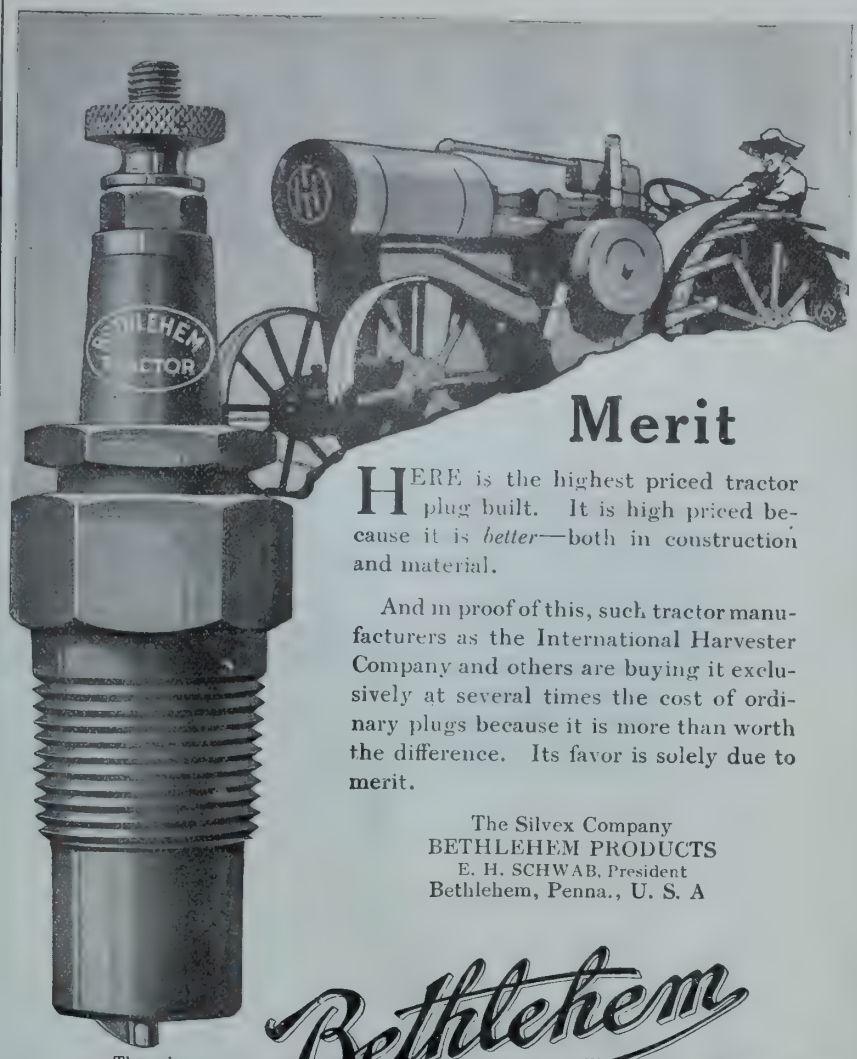
The Alfred Collyer Company will handle the Roller—Smith Company's products of instruments and circuit breakers. The Collyer Company has had an extensive experience in marketing electrical apparatus.

The Alfred Collyer Company, which also represents the Wagner Electric Manufacturing Company, has a branch office at 183 George Street, Toronto.

HYSLOP CATALOGUE

SEASONABLE automobile necessities for the next few months are featured in the Hyslop Bros., Toronto, fall and winter bulletin, which is a supplement to their annual catalog. It is printed especially for dealers in automobiles and automotive equipment.

KEMPTVILLE. — William Dickinson, Chevrolet agency, is building a large showroom and garage in Asa Street. It will be one of the most up-to-date in the district. The garage will be in charge of Wilson and Grew.



There is a Bethlehem plug for every type of motor.

Merit

HERE is the highest priced tractor plug built. It is high priced because it is *better*—both in construction and material.

And in proof of this, such tractor manufacturers as the International Harvester Company and others are buying it exclusively at several times the cost of ordinary plugs because it is more than worth the difference. Its favor is solely due to merit.

The Silvex Company
BETHLEHEM PRODUCTS
E. H. SCHWAB, President
Bethlehem, Penna., U. S. A

Bethlehem SPARK PLUGS

No Binding at Curves

The BT Manure Carrier runs around curves in the overhead track as easily as on the straight track. The track wheels are placed one behind the other on an arm, which swivels, and for this reason there is no difficulty at the curves. There is no lagging or jerking. The carrier runs out smoothly with the largest load.

For further information about the BT Manure Carrier, write to

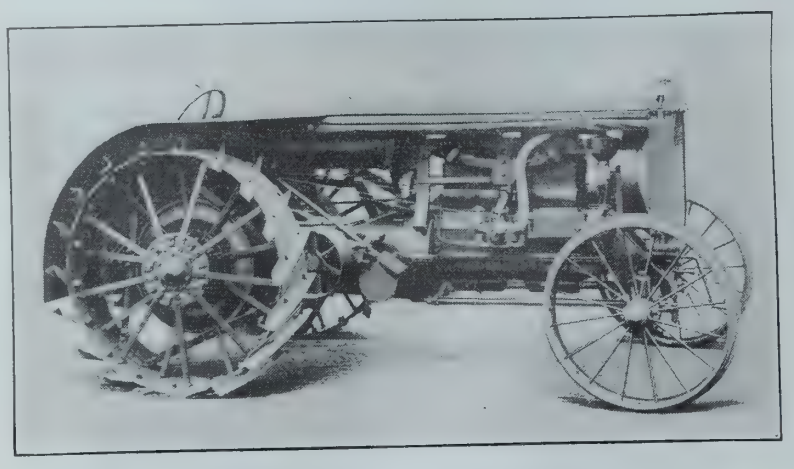
Beatty Bros., Limited

Winnipeg, Man. Fergus, Ont. Montreal, Que.
Edmonton, Alta. London, Ont. St. John, N.B.
16 Holborn Viaduct, London, England.

Manure BT TRADE SAVER Carriers

ALLIS-CHALME

ARE IN

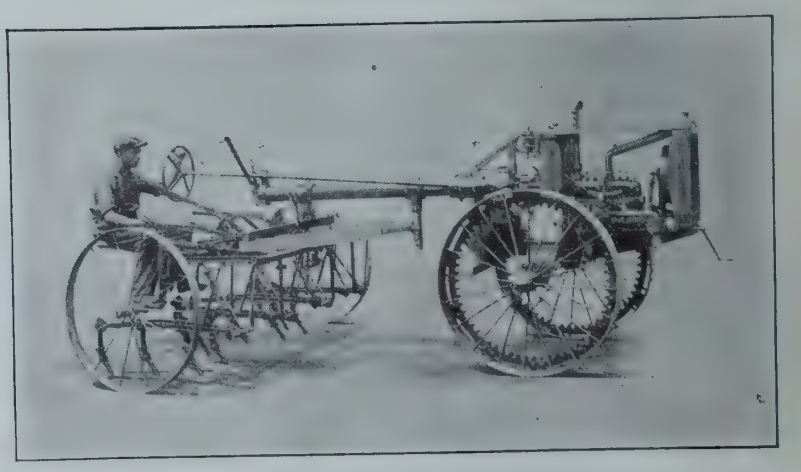


The 18-30 Tractor

Burns kerosene at all loads economically. Develops 18 horse power on the draw bar and 30 on the belt with plenty of reserve. Our own tractor from radiator to draw bar. All moving parts enclosed. Officially proven a leader in the tractor field. Weight 6,000 lbs. Price complete $1,785.00 f.o.b. factory.

CANADIAN ALLIS

Head Office: 212 King



RS TRACTORS

CANADA

Distributors, Jobbers, Dealers, *Attention!*

Investigate the Mechanical Features and record of past performances.

The enormous Allis-Chalmers organization will stand behind you. Very desirable territory still open. Write for particulars of our liberal sales proposition and remember the prices are the same as in the United States.

The Duplex Hitch Enables a farmer to have two units for the lighter work and a big 4-wheel drive for plowing. Surprising amount of power. Easily connected or disconnected in twenty minutes.

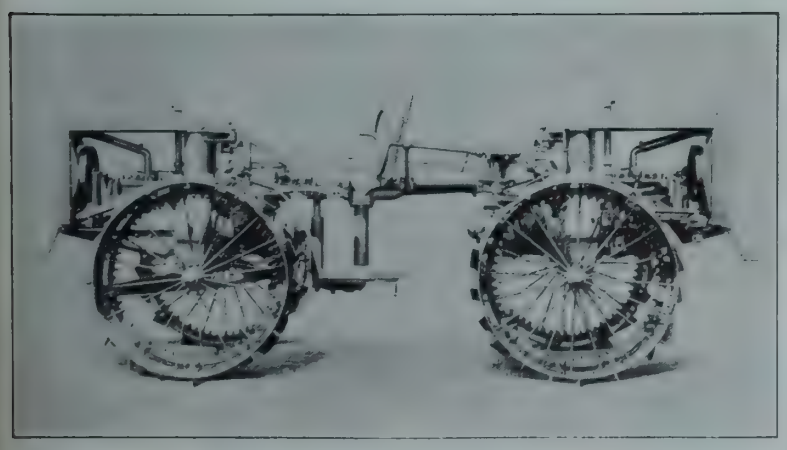
The 6-12 Tractor

Readily attached to any farm implement of any make requiring four horses or less. Specially adapted to plowing, discing, seeding, cultivating and for pulling a binder, mower, rake, manure spreader, etc., as a one-man outfit.

12 Belt Horse Power. Price complete with belt pulley, lugs and truck $795.00 f.o.b. factory.

CHALMERS, Limited

est, TORONTO



CANADIAN

Motor, Tractor and Implement Trade Journal

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This directory will help you with your buying and your planning. The advertisers listed here are thoroughly reliable and leaders in their respective fields. They are looking for live, wide-awake representatives. Study their advertisements carefully because they contain valuable information which will dovetail with your plans. We are glad to go to the trouble of arranging this list—to make it easy for you to select new lines. If it so happens that what you want is not here, write us, and we will tell you where to get it.

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BEET MACHINERY
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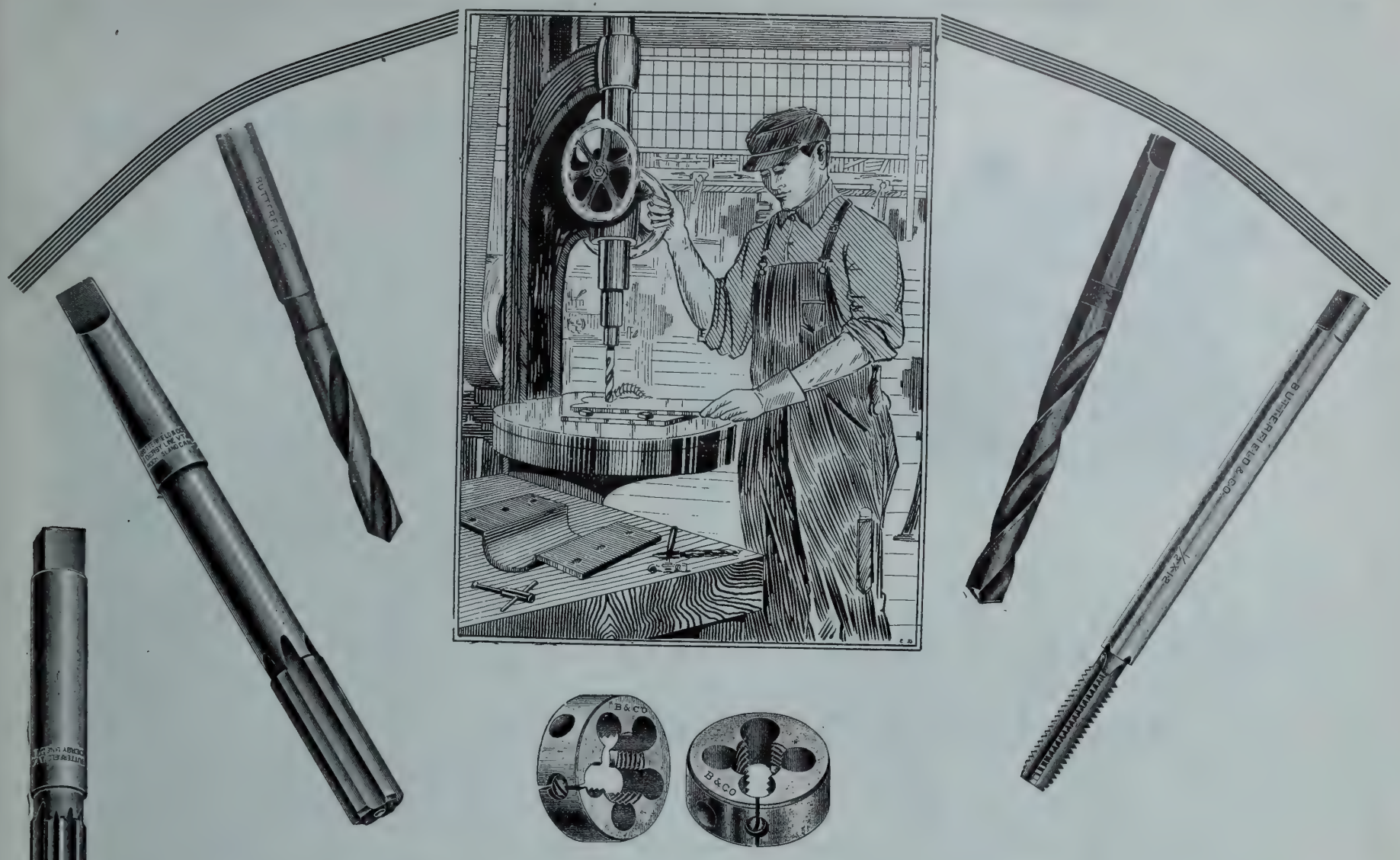

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Drills, Taps, Dies, Reamers

and Milling Cutters

You never know the real value of a tool till you try it.
Real value is determined by long, hard service.
Try Butterfield tools and you'll say they're the cheapest in the long run.

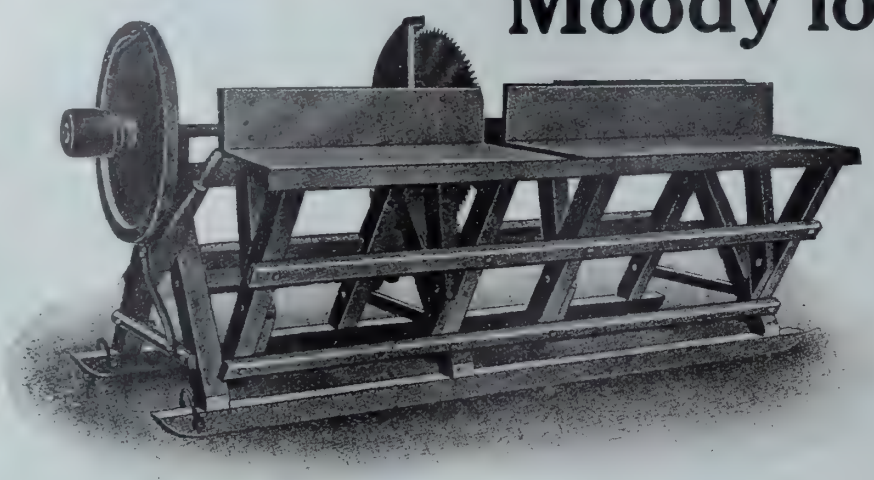
Tools That Retain Their Keen Edges After Long Usage

Every nickel you save in tool service adds a nickel to your profit on repair work.

May we send catalogue?

Butterfield & Co., Inc.
Rock Island, Quebec

Moody long swing table saw



Cutting qualities are not the only essentials to be considered in selecting a good circular saw. Consideration should be given to its safety in operation. This Moody Long Swing Table Saw is designed to be absolutely safe as well as to possess superior cutting qualities. Carefully seasoned hardwood, of ample size and weight, strongly braced and bolted together, give it exceptional strength—no gears, no complicated pieces. Log tables are plated with heavy steel plates and every saw that leaves our factory is equipped with a safety strap around the shaft close up to the circular saw, a precaution against accident in case box of saw shaft or bolt should break.
The machine could not be made safer.

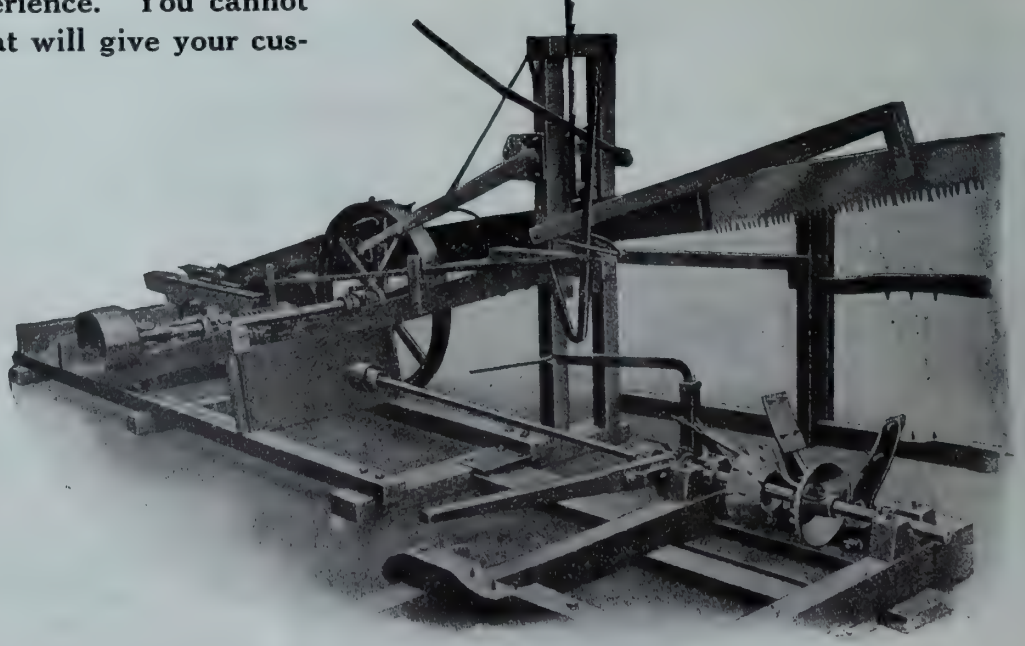
Safety, Fast Cutting and Long Service

Moody Saws are handy, strong and durable. They are first-class machines at low prices. Farmers everywhere are now appreciating the advantage and profit in owning and operating a sawing machine of their own. They can cut their own wood and make money cutting their neighbor's wood, too.

The Moody Improved Drag Saw Machine

Recent and ingenious improvements made on this drag saw have made it superior in service to any machine of its kind on the market. By means of a new special device the saw is put to rest and the self-feed continues running. No stopping is necessary now in moving the log. There's no inconvenience or delay of any kind. Our pressure lever is another new improvement, which can be used with convenience when required. Still another new and important feature is the log holder. It permits the convenient cutting of short cord-wood without the slightest danger. The whole outfit is made stable and rigid by a still, hardwood connecting plank.
No other machine compares with it for service.

Mr. Dealer, you'll find Matthew Moody saws well spoken of wherever they are known. Their construction embodies all the features that have been proven best by years of practical experience. You cannot recommend or sell a machine that will give your customers better satisfaction.



Matthew Moody & Sons Co.

Head Office

Terrebonne, Quebec

Represented in the West by

Messrs. Francoeur Bros., Camrose, Alta.
New Home Machinery Co., Saskatoon, Sask.
Mitchell's Hardware Co., Brandon, Man.

Mr. Dealer,

The Beaver Agency is a big Money Maker

The Beaver Truck, which is the result of actual truck knowledge, based on approved engineering, is

Canada's Lowest Hauling Cost

We can prove these statements by comparative demonstrations---by comparative values.

Write for full details and Agency Proposition

---It is built on sound engineering practice and built to endure.

---It is built by Canada's largest exclusive truck factory.

---It is built by men long experienced in the manufacture of motor-trucks and who know Canada's transportation problems.

---Part of the large saving in duty on American trucks is put into extra built-in value and the balance is deducted from the usual list price of the trucks.

Beaver Trucks

Manufactured in Canada by

Beaver Truck Builders, Limited, Hamilton, Ont.

Canada will be proud of the CHASE TRACTOR Institution

IN purchasing the interests of the Chase Motor Truck Company; in transferring the manufacturing headquarters to Toronto; in choosing Canada as the centre from which to conduct a world-wide business in tractors; this firm made tractor history.

Canada's future is closely linked to the tractor industry. Without tractors Canada's broad acres must stand untilled and unproductive.

It is fitting that Canada should have a tractor made to meet Canadian conditions.

And it is fitting that Canada, a leader among the farming countries of the world, should supply tractors to other countries.

There is a demand now among Canada's farmers for more tractors and better tractors. **Not** for **cheaper** tractors, but for tractors that are reliable, tractors that have power for every field job and every belt job on the farm.

Canadian farmers are not saying give us a tractor for less money. They know now they cannot afford to buy cheap tractors. They are turning to tractors like the Chase and paying more for them because that has proven to be the soundest economy.

The Chase Tractors project therefore must command interest.

That it will succeed is assured by the calibre of the men who have undertaken it, by their record as successful manufacturers, by their genius for industrial organization, and by the high ideals which have shaped the policies for this new enterprise.

Robert J. and William J. Cluff achieved a manufacturing miracle in producing over five million shells for the Allied powers. It is not too much to expect that they can produce tractors with the same degree of efficiency, adjust them as accurately, inspect them as rigidly.

These men are interested in only one grade of tractor, the very best that they can produce, the only kind they would want to use on their own farms.

They want the Chase to make money for the farmers who buy it. They insist that every part of every tractor must be right, that it must be properly adjusted, that it must be tested and inspected—and that after a farmer buys it, the factory must look after it for him.

In this project they give expression to their high ideals as manufacturers.

On this policy will be founded a big institution with a world-wide market.

In this industry Chase Tractors will be produced in sufficient quantities so that without cutting down quality, manufacturing costs will be reduced.

In this Chase Tractor the Canadian farmer finds dependable power that will make him a profit at home and bring Canada credit abroad.

Organization Opportunity for Local Dealers

Very rapidly an organization of big distributors is being formed to co-operate in carrying out the Chase policies. Reliable dealers will find an opportunity in every locality to create business and profit for themselves through a connection with the Chase Institution.

We invite correspondence with men of integrity, business experience and vision, with a view to rounding out our dealer organization.

CHASE TRACTORS CORPORATION LIMITED, TORONTO